

**IN THE CIRCUIT COURT OF THE SEVENTH JUDICIAL CIRCUIT IN AND FOR
PUTNAM COUNTY, FLORIDA**

METALIZING TECHNICAL SERVICES LLC,

Plaintiff,

v.

CASE NO.: 2021 CA 053

BERKSHIRE HATHAWAY SPECIALTY
INSURANCE COMPANY,

Defendant.

COMPLAINT FOR BREACH OF BOND

Plaintiff, METALIZING TECHNICAL SERVICES LLC ("MTS"), by and through its undersigned counsel, hereby files this Complaint against BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY ("SURETY"), and states:

1. This is an action for damages in excess of thirty thousand dollars (\$30,000.00), exclusive of interest, costs, and attorney's fees.

2. MTS is a Florida Limited Liability Company with its principal place of business at 190 Comfort Road, Palatka, Florida 32177, in Putnam County.

3. SURETY is a foreign corporation who is authorized to and is conducting business in the state of Florida.

4. Pursuant to § 48.193, Fla. Stat. (2016), SURETY is subject to the jurisdiction of the courts of this state because it operates, conducts, engages in or carries on a business venture in this State, namely, the issuance of construction contract surety bonds to guaranty payment to subcontractors and suppliers on public work projects.

5. SURETY has breached a bond which it issued in this state by failing to perform acts required by the bond to be performed in this state; to wit: prompt payment to MTS for the

labor, materials, equipment, and supplies furnished for the State of Florida Department of Transportation (“FDOT”) project known as Bridge Repair and/or Rehabilitation along State Road A1A/MacArthur Causeway East Bridge #870077 in Miami-Dade County (“PROJECT”).

6. Venue is proper in Putnam County, Florida pursuant to § 47.051, Fla. Stat. (1973) because SURETY wrongfully failed and refused to make payment to MTS at its principal place of business which is located in Putnam County, Florida.

7. On March 26, 2018, FDOT entered into a contract with a general contractor, Lead Engineering Contractors, LLC, for the work required for the PROJECT. A true and correct copy of the contract, less drawings and technical specifications to numerous and voluminous to append hereto but which are in the possession of SURETY, is attached hereto and fully incorporated hereto as Exhibit “A.”

8. MTS provided labor, materials, equipment, and supplies required for the performance of the painting part of the FDOT contract and now makes this claim pursuant to the provisions of that contract.

9. The FDOT contract required the general contractor to make prompt payment to subcontractors who provided labor, materials, equipment, and supplies for the PROJECT.

10. As required by Florida law, and the FDOT contract, SURETY issued to FDOT a contract bond, Bond No. 47SUR300057010004 (“BOND”), in the penal sum amount of Twelve Million Nine Hundred Sixty-Two Thousand One Hundred Eighty-Three and 16/100 Dollars (12,962,183.16), in part, as security for MTS’s payment. The BOND is specifically incorporated into, and made a part of the FDOT contract. A true and correct copy of the BOND is attached hereto and fully incorporated hereto as Exhibit “B.”

11. SURETY's BOND, which is incorporated into the FDOT contract, states, "[t]he Contractor shall promptly make payment to all persons furnishing labor, material, equipment, and supplies, and all persons defined in Section 713.01, Florida Statutes, whose claims derive directly or indirectly from the prosecution of the work provided for in the Contract . . ."

12. Further, the FDOT surety bond statute, § 337.18, Fla. Stat. (2016), provides, "[a]ll bonds shall be payable to the department and conditioned . . . for the prompt payment of all persons defined in s.713.01 furnishing labor, material, equipment, and supplies for work provided in the contract . . ."

13. MTS is a claimant under § 713.01, Fla. Stat. (2007), as it performed the painting work for the FDOT contract.

14. MTS notified SURETY that it had not been paid for the labor, materials, equipment, and supplies furnished and demanded SURETY to honor the terms of its BOND and make payment to MTS at 190 Comfort Road, Palatka, Florida 32177; however, SURETY wrongfully failed and refused to do so. A true and correct copy of one of MTS's payment demands to SURETY is attached hereto and fully incorporated hereto as Exhibit "C."

15. By failing to make prompt payment to MTS, SURETY has materially breached the BOND and violated the prompt payment requirement of § 337.18(1)(a)(2), Fla. Stat. (2016).

16. On account of SURETY's material breach of the BOND and violation of Florida law, MTS has been substantially damaged.

17. All conditions precedent of the BOND and § 337.18, Fla. Stat. (2016) have occurred, been performed, or have been waived.

18. MTS has been required to retain the services of it undersigned legal counsel to prosecute its claims for breach of the BOND and § 337.18(1)(d), Fla. Stat. (2016). MTS, as the

prevailing party, is entitled to recover its reasonable fees for the services of its undersigned attorney for trial and appeal, in an amount to be determined by the court, which fee must be taxed as part of the prevailing party's costs.

WHEREFORE, Plaintiff, METALIZING TECHNICAL SERVICES, LLC, respectfully requests this Court to enter final judgment against Defendant, BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, for damages, interest, taxable costs, attorneys' fees, and such other and further relief as this Court deems just and proper.

NOTICE OF COMPLIANCE WITH RULE 2.516

The undersigned attorneys give notice of their compliance with the Florida Rules of Judicial Administration 2.516(b)(1) and designate the following e-mail addresses for service in this action:

dgurley@GurleyAssociates.com
agurley@GurleyAssociates.com
eservice@GurleyAssociates.com

GURLEY & ASSOCIATES, P.A.

By: /s/ Alex L. Gurley

David E. Gurley

Florida Bar No. 0402214

dgurley@GurleyAssociates.com

Alex L. Gurley, Esq.

Florida Bar No. 0126321

agurley@GurleyAssociates.com

Secondary: eservice@GurleyAssociates.com

601 S. Osprey Avenue

Sarasota, FL 34236

Telephone: (941) 365-4501

Facsimile: (941) 365-2916

Attorneys for Plaintiff, Metalizing Technical Services, LLC

EXHIBIT A

**State of Florida
Department of Transportation**



CONTRACT DOCUMENTS FOR E-6K72

**Providing Bridge Repair and/or Rehabilitation
along State Road A1A/MacArthur Causeway
East Bridge #870077 in Miami-Dade County**

**Financial Project Number(s): 436522-1-52-01
Proposal/Contract Number: E-6K72**

Contract Number: E-6K72

**Providing Bridge Repair and/or Rehabilitation along State Road A1A/Macarthur Causeway
East Bridge #870077 in Miami-Dade County.**

The completed agreement for this project includes the following documents:

ITEM #	DESCRIPTION
1	BID BLANK, FORM # 375-020-17
2	CONTRACT, FORM # 375-020-26 <i>(must be executed and returned with contract)</i>
3	CONTRACT BOND, FORM # 375-020-27 <i>(must be executed and returned with contract)</i>
4	CONTRACT AFFIDAVIT, FORM # 375-020-30 <i>(must be executed and returned with contract)</i>
5	BID SOLICITATION NOTICE (ADVERTISEMENT)
6	WORKFORCE & BITUMINOUS MATERIALS DOCUMENT
7	FUEL ALLOCATION REPORT
8	CONTRACTOR'S BID
9	CONTRACT SCHEDULE AND APPROXIMATE QUANTITIES
10	ADDENDA
11	QUESTION AND ANSWER
12	SPECIFICATIONS

DS
RC

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

**BID BLANK
STATE JOB**375-020-17
CONTRACTS ADMINISTRATION
OGC - 09/13

Let by: District 6 - Miami

Lead Engineering Contractors, LLC.

(Void if used by any bidder other than one this Form issued to)

FINANCIAL PROJECT NO(S): 436522-1-52-01**ROAD(S) NO(S):** State Road A1A/Macarthur Causeway

This project is let under the authority of Chapter 337, F.S.

CONTRACT NO.: E6K72**CONTRACT CALENDAR DAYS:** 740**DATE BIDS DUE:** 1/25/2018**TOTAL AMOUNT:****DATE OF AWARD:** 3/2/2018

\$ 12,962,183.16

DATE OF CONTRACT**EXECUTION:** 3/26/201810.65 % DBE Availability**PROPOSAL**

To Accompany
THE STANDARD SPECIFICATIONS AS AMENDED BY THE SPECIFICATIONS PACKAGE AND
ANY SUPPLEMENTAL SPECIFICATIONS PACKAGES, AND THE PLANS.

FOR ABOVE PROJECT(S)

A contract that consists of Bridge Repair and/or Rehabilitation along State Road A1A/Macarthur Causeway

East Bridge #870077

in Miami-Dade

County(ies)

NOTE: Attach your Proposal Guaranty to this bid blank. All Extensions must be carried out. Any changes made in unit bid prices must be initialed by bidder.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

**CONTRACT
District**375-020-26
CONTRACTS ADMINISTRATION
OGC - 08/15

This Contract, is entered into between the State of Florida Department of Transportation, hereinafter called the Department, and
Lead Engineering Contractors, LLC,
of 5201 Blue Lagoon Drive, Suite 590, Miami, FL 33126, herein called the Contractor.

The Contractor agrees with the Department, for the consideration herein mentioned, and at its own proper cost and expense, to do all the work and furnish all the materials, equipment, supplies and labor necessary to carry out this Contract in the manner and to the full extent as set forth in the Proposal, Standard Specifications as Amended by the Specifications Package and any Supplemental Specifications Packages, and the Plans, under security as set forth in the attached bond, all of which are hereby adopted and made part of this Contract and incorporated by reference herein, and to the satisfaction of the duly authorized representatives of the Department of Transportation, who shall have at all times full opportunity to inspect the materials to be furnished and the work to be performed under this Contract.

The Contractor shall also maintain such insurance as will protect the Department from any or all claims for property damage, personal injury and bodily injury including death, which may arise from operations under this Contract. Certificates of such insurance shall be filed with the Department and shall be subject to its approval for adequacy of protection.

It is agreed that the work to be done under this Contract is to construct or otherwise improve the road(s), bridge(s), and building(s) described as:

A contract that consists of Bridge Repair and /or Rehabilitation along State Road A1A/MacArthur Causeway East Bridge #870077

in Miami-Dade County(ies), a distance of approximately N/A
and known as Federal Aid Project No(s): N/A
Financial Project No(s): 436522-1-52-01 Contract No. E6K72

Complete the following as appropriate

Entity Name: <u>Lead Engineering Contractors, LLC.</u>	(Seal)
Authorized Signature: <u>Mauricio Gonzalez</u>	Name & Title (Print): <u>Mauricio Gonzalez</u> President & CEO
*Signature: _____	Name & Title (Print): _____

*In the event of a Partnership both signature and printed name of 2 partners must be affixed.

Organized and existing under the laws of the State of Florida and authorized to do business in the State of Florida, pursuant to the laws of the State of Florida.

DocuSigned by:
Nadine Chinapoo
District 6

DocuSigned by:
Alicia Inujillo 3/21/2018 | 2:54 PM
Attorney FDOT Date
District 6 General Counsel

In consideration of the foregoing premises, the Department agrees to pay the Contractor, for all items of work performed and material furnished at the unit prices and under conditions set forth in the attached proposal.

IN WITNESS WHEREOF, the Department has hereunto caused these presents to be subscribed and the Contractor has affixed its name and seal, the date aforesaid. The terms of this contract shall be binding upon full execution and date referenced below.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

By: Randy Garcia Date: 3/26/2018 | 11:58 AM EDT
Director of Transportation Operations

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

CONTRACT BOND

375-020-27
CONTRACTS ADMINISTRATION
OGC - 08/12
Page 1 of 2

Bond No. 47SUR300057010004

KNOW ALL MEN BY THESE PRESENTS: That we, Lead Engineering Contractors, LLC.

(Entity Name) having its principal place of business at 5201 Blue Lagoon Drive, Suite 590, Miami, FL 33126
305-615-3272
(Bidding Office Street Address, City, State, Zip and Phone #)
(hereinafter called Principal or Contractor) and BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY
hereinafter called Surety), duly authorized to do business in the State of Florida, pursuant to the laws of the State of Florida,
having its principal place of business at 1314 Douglas Street, Suite 1400, Omaha, NE 68102-1944
(City, State, Zip) are held and firmly bound unto the State of Florida, in the full and just sum of
Twelve Million Nine Hundred Sixty-Two Thousand One Hundred Eighty-Three Dollars and 16/100
DOLLARS (\$ 12,962,183.16), lawful money of the United States of America, to be paid to the Florida Department
of Transportation, to which payment well and truly be made we bind ourselves, our heirs, executors, administrators,
successors and assigns, jointly and severally and firmly by these presents; WHEREAS, the above-bound Principal has
subscribed to a contract with the State of Florida Department of Transportation (hereinafter called the Department), for
constructing or otherwise improving a road(s), bridge(s), and building(s)
A contract that consists of Intersection Improvements along State Road 907/Alton Road at Michigan Avenue

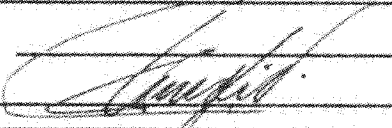

in Miami-Dade County(ies),
particularly known as Federal Aid Project No(s): N/A
Financial Project No(s): 436522-1-52-01 Contract No. E6K72

(hereinafter called the Contract), upon certain terms and conditions in the Contract more particularly mentioned; and
WHEREAS, it was one of the conditions of the Contract that these presents shall be executed; NOW, THEREFORE, the
conditions of this obligation are such that if the above-bound Principal in all respects shall comply with Section
337.18(1), Florida Statutes, and shall promptly, faithfully, efficiently, and fully perform the Contract according to plans and
specifications as therein referred to and made a part thereof, and any alterations as may be made in said plans and
specifications as provided for therein, and within the time period specified, and further, shall remedy any errors in partial
or final estimates and any defects which may exist, appear, occur or result in or from said work within a period of two (2)
years from the date of final acceptance of the work under the Contract and further if the Contractor shall promptly make
payment to all persons furnishing labor, material, equipment, and supplies, and all persons defined in Section 713.01,
Florida Statutes, whose claims derive directly or indirectly from the prosecution of the work provided for in the Contract
(See Section 337.18(1) (a)-(f), F.S., for specific "claim" notice and time limitation requirements), and shall promptly pay
all State Workers' Compensation and Unemployment Compensation taxes incurred in the performance of the Contract,
and shall be liable to the State in a civil action instituted by the Department or any officer of the State authorized in such
cases for double any amount in money or property the State may lose or be overcharged or otherwise defrauded of, by
reason of any wrongful or criminal act, if any, of the Contractor, its agents, and employees, and should the Contractor not
be declared to be in default under the Contract then the bond shall be deemed void. In the event of default by the
Contractor, the Surety shall pay the Department in addition to the above obligations, all liquidated damages and
disincentives assessed against the Contractor because of the default which were not withheld from Contract proceeds
and if the Department at its sole option demands that the Surety take over the project and provided further that should
the Department elect to have the Surety to take over the project, then in such event, the Surety may not select the
Contractor or any affiliate of the Contractor to complete the project for and on behalf of the Surety without the
Department's express written consent and, finally, if the subject Contract required contractor qualification, under Section
337.14, Florida Statutes, or otherwise, the Surety must use a qualified contractor, who is approved by the Department, to
perform the work. It is further covenanted and agreed that any alterations or additions made under this Contract or in the
work to be performed therein or the granting of any extension of time for the performance of the Contract or any other
forbearance by or on the part of either the Department or the Principal shall not in any way release the Principal and the
Surety or either of them, their respective heirs, executors, administrators, successors, or assigns, from any liability
hereunder. Notice to the Surety of such alterations, extension, or forbearance is hereby specifically waived. Under this
bond, the surety, pursuant to Section 337.11(9)(a), F.S. shall be fully liable under such surety bond to the full extent of
any modified contract amount up to and including 25 percent over the original contract amount and without regard to the
fact that the surety was not aware of or did not approve such modifications. However, if modifications of the original
contract amount cumulatively result in modifications of the contract amount in excess of 25 percent of the

original contract amount, the surety's approval shall be required to bind the surety under the bond on that portion in excess of 25 percent of the original contract amount. This obligation shall remain in full force and effect until the full performance of all covenants, terms, and conditions herein stipulated. Failure by the Surety to perform its obligations under the terms of this bond may result in the Surety being disqualified from issuing bonds for future Department contracts.

WITNESS the signature of the principal (Contractor) and the signature of the Surety by Charles J. Nielson its Attorney-In-Fact/Fla. Res. Agent (Agent or Attorney-in-Fact) with the seals of said Principal and Surety hereunto affixed this 9th day of March, 2018

Complete the following as appropriate

Entity Name: <u>Lead Engineering Contractors, LLC</u>	(Seal)
Authorized Signature: 	Name & Title (Print): _____
*Signature: 	Name & Title (Print): <u>FRANCISCO GONZALEZ, PE</u> <u>PRESIDENT & CEO</u>

*In the event of a Partnership both signature and printed name of 2 partners must be affixed.

Organized and existing under the laws of the State of <u>Florida</u> the laws of the State of Florida.	and authorized to do business in the State of Florida, pursuant to
Countersigned: <u>Charles J. Nielson, Florida Licensed Insurance Agent</u>	<u>Berkshire Hathaway Specialty Insurance Company</u> Surety Company Name (Print) (Seal)
Print information below (Florida Licensed Insurance Agent; whether in Attorney-in-Fact or Countersignature role):	By: <u>Florida Licensed Insurance Agent or Attorney-in-Fact (Surety)</u>
Name: <u>Nielson, Hoover & Company - Charles J. Nielson</u>	<input checked="" type="checkbox"/> Above Signatory is also a Florida Licensed Insurance Agent (check if applicable and complete business name, address and telephone number block; if not, have such an agent countersign and complete block)
Business Address: <u>8000 Governors Square Blvd., Miami Lakes, FL 33016</u>	NOTE: Power of Attorney showing authority of Surety's Agent or Attorney-in-Fact is to be attached.
Telephone: <u>(305) 722-2663</u>	

Contractor shall record this bond in the official records of the Clerk of Court of the county where the improvement is located prior to commencing the work in accordance with Section 337.18(1)(b), Florida Statutes.

Send "Notices to Owner" to:

District 6

Florida Department of Transportation, District 6
Construction Engineer or Maintenance Engineer
1000 Northwest 111th Avenue
Miami, FL 33172
Phone # (305) 470-5100

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

CONTRACT AFFIDAVIT

375-020-30
CONTRACTS ADMINISTRATION
OGC - 10/07

STATE OF Florida
COUNTY OF Miami-Dade

Before me, the undersigned authority, personally appeared Charles J. Nielson

(Attorney-In-Fact)

who, being duly sworn, deposes and says that he/she is a duly authorized insurance agent, properly licensed under the laws

of the State of Florida (If applicable, otherwise N/A), to represent Berkshire Hathaway Specialty Insurance Company (Surety Co.)
of Omaha, NE a company authorized to make surety bonds under the laws of the
State of Florida. (City and State)

Charles J. Nielson

further certifies that as Attorney-in-Fact

for the said Berkshire Hathaway Specialty Insurance Company (Attorney-In Fact for Surety Co.) has signed the attached bond in the sum of

\$ 12,962,183.16 on behalf of Lead Engineering Contractors, LLC. (Contractor)
covering Financial Project No.(s) 436522-1-52-01

Contract No.(s) E6K72; in Miami-Dade County(ies), Florida.

Said Charles J. Nielson further certifies that the premium on the
said bond is \$103,318.00, which will be paid in full direct to him/her as

Attorney-in-Fact, and included in his/her regular accounts to the said Berkshire Hathaway Specialty Insurance Company

and that he/she will receive a regular commission of 27.5% per cent as
Attorney-in-Fact for the execution of said bond and that the commission will not be divided with anyone except as follows:

per cent to N/A (If applicable, otherwise N/A) (N/A, if not applicable)

who is a duly authorized Florida Licensed Insurance Agent properly licensed under the laws of the State of Florida.

ACKNOWLEDGMENT FOR ATTORNEY-IN-FACT

Charles J. Nielson
Agent or Attorney-in-Fact

Sworn to and subscribed before me this 9th day of March, 2018 by

Charles J. Nielson

(name of affiant)

He/She is personally known to me or has produced

(Personally Known) as identification.

(type of identification)

Olga Iglesias

(Notary Signature)

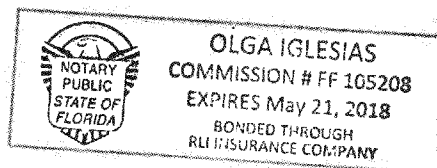
(Notary's printed name)

My commission expires

Notary Public State of Florida

COUNTERSIGNED (If applicable):

Charles J. Nielson
Florida Licensed Insurance Agent





**Berkshire Hathaway
Specialty Insurance**

Power Of Attorney

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY NATIONAL INDEMNITY COMPANY / NATIONAL LIABILITY & FIRE INSURANCE COMPANY

Know all men by these presents, that **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at 100 Federal Street, 20th Floor, Boston, Massachusetts 02110, **NATIONAL INDEMNITY COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Connecticut (hereinafter collectively the "Companies"), pursuant to and by the authority granted as set forth herein, do hereby name, constitute and appoint: David Hoover, Charles D. Nielson, Shawn Burton, Charles J. Nielson, Laura Mosholder, 8000 Governors Square Blvd., Suite 101, of the city of Miami Lakes, State of Florida, their true and lawful attorney(s)-in-fact to make, execute, seal, acknowledge, and deliver, for and on their behalf as surety and as their act and deed, any and all undertakings, bonds, or other such writings obligatory in the nature thereof, in pursuance of these presents, the execution of which shall be as binding upon the Companies as if it has been duly signed and executed by their regularly elected officers in their own proper persons. This authority for the Attorney-in-Fact shall be limited to the execution of the attached bond(s) or other such writings obligatory in the nature thereof.

In witness whereof, this Power of Attorney has been subscribed by an authorized officer of the Companies, and the corporate seals of the Companies have been affixed hereto this date of November 2, 2017. This Power of Attorney is made and executed pursuant to and by authority of the Bylaws, Resolutions of the Board of Directors, and other Authorizations of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, which are in full force and effect, each reading as appears on the back page of this Power of Attorney, respectively. The following signature by an authorized officer of the Company may be a facsimile, which shall be deemed the equivalent of and constitute the written signature of such officer of the Company for all purposes regarding this Power of Attorney, including satisfaction of any signature requirements on any and all undertakings, bonds, or other such writings obligatory in the nature thereof, to which this Power of Attorney applies.

**BERKSHIRE HATHAWAY SPECIALTY
INSURANCE COMPANY,**

By:

David Fields, Executive Vice President



**NATIONAL INDEMNITY COMPANY,
NATIONAL LIABILITY & FIRE INSURANCE COMPANY,**

By:

David Fields, Vice President



NOTARY

State of Massachusetts, County of Suffolk, ss:

On November 2, 2017 before me appeared David Fields, Executive Vice President of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY** and Vice President of **NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, who being duly sworn, says that his capacity is as designated above for such Companies; that he knows the corporate seals of the Companies; that the seals affixed to the foregoing instrument are such corporate seals; that they were affixed by order of the board of directors or other governing body of said Companies pursuant to its Bylaws, Resolutions and other Authorizations, and that he signed said instrument in that capacity of said Companies.

[Notary Seal]



Notary Public

I, Ralph Tortorella, the undersigned, Officer of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies which is in full force and effect and has not been revoked. IN TESTIMONY WHEREOF, I have hereunto affixed the seals of said companies this date of March 9, 2018.



Officer

To verify the authenticity of this Power of Attorney please contact us at: BHSI Surety Department, Berkshire Hathaway Specialty Insurance Company, 100 Federal Street, 20th floor, Boston MA 02110 (617) 936-2971 or by email at: Courtney.Walker@bhspecialty.com. **THIS POWER OF ATTORNEY IS VOID IF ALTERED.**
To notify us of claim please contact us on our 24-hour toll free number at (855) 453-9675, via email at: claimsnotice@bhspecialty.com, via fax to (617) 507-8529, or via mail 500 Northpark Town Center, 1100 Abernathy Road, N.E., Suite 1200, Atlanta, GA 30328.

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY (BYLAWS)**ARTICLE V.****CORPORATE ACTIONS**

....

EXECUTION OF DOCUMENTS:

....

Section 6.(b) The President, any Vice President or the Secretary, shall have the power and authority:

- (1) To appoint Attorneys-in-fact, and to authorize them to execute on behalf of the Company bonds and other undertakings, and
- (2) To remove at any time any such Attorney-in-fact and revoke the authority given him.

NATIONAL INDEMNITY COMPANY (BY-LAWS)**Section 4. Officers, Agents, and Employees:**

A. The officers shall be a President, one or more Vice Presidents, a Secretary, one or more Assistant Secretaries, a Treasurer, and one or more Assistant Treasurers none of whom shall be required to be shareholders or Directors and each of whom shall be elected annually by the Board of Directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the Board of Directors, and shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the Board of Directors; and the Board of Directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the corporation.

NATIONAL INDEMNITY COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BY-LAWS)**ARTICLE IV****Officers****Section 1. Officers, Agents and Employees:**

A. The officers shall be a president, one or more vice presidents, one or more assistant vice presidents, a secretary, one or more assistant secretaries, a treasurer, and one or more assistant treasurers, none of whom shall be required to be shareholders or directors, and each of whom shall be elected annually by the board of directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the board of directors. The president and secretary shall be different individuals. Election or appointment of an officer or agent shall not create contract rights. The officers of the Corporation shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the board of directors; and the board of directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the Corporation.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.



LEADENG-01

HTORRES

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
03/15/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER American Global of Florida LLC 2121 SW 3rd Avenue 5th Floor Miami, FL 33129	CONTACT NAME: Michael Marino PHONE (A/C, No, Ext): (305) 351-9150 E-MAIL ADDRESS: info@americanglobal.com FAX (A/C, No):														
INSURED LEAD Engineering Contractors, LLC 5201 Blue Lagoon Drive, Suite 590 Miami, FL 33126	<table border="1"> <thead> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A : Old Republic General Insurance Corp</td> <td>24139</td> </tr> <tr> <td>INSURER B : Landmark American Insurance Company</td> <td>33138</td> </tr> <tr> <td>INSURER C : Aspen American Insurance Company</td> <td>43460</td> </tr> <tr> <td>INSURER D :</td> <td></td> </tr> <tr> <td>INSURER E :</td> <td></td> </tr> <tr> <td>INSURER F :</td> <td></td> </tr> </tbody> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A : Old Republic General Insurance Corp	24139	INSURER B : Landmark American Insurance Company	33138	INSURER C : Aspen American Insurance Company	43460	INSURER D :		INSURER E :		INSURER F :	
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COVERAGES		CERTIFICATE NUMBER:		REVISION NUMBER:		
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.						
INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD, WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:	X	X A4CG1371701	09/06/2017	09/06/2018	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY	X	X A4CA11371701	09/06/2017	09/06/2018	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
B	<input type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> EXCESS LIAB DED \$ RETENTION \$	X	X LHA080516	09/06/2017	09/06/2018	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000
A	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input type="checkbox"/> N/A	X A4CW11371701	09/06/2017	09/06/2018	<input checked="" type="checkbox"/> PER STATUTE <input checked="" type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
C	Equipment Floater		IMZ251917B	09/06/2017	09/06/2018	Leased Equipment 250,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
 Contract No. E6K72 - Providing Bridge Repair and/or Rehabilitation along State Road A1A/MacArthur Causeway East Bridge #870077 in Miami-Dade County

When required by written contract, The Florida Department of Transportation is an additional insured with respect to Auto Liability and General Liability for ongoing and completed operations. Waiver of subrogation applies with respect to General Liability and Workers' Compensation when required by written contract. Thirty day notice of cancellation applies in favor of the Department for all policies.

CERTIFICATE HOLDER Florida Department of Transportation 1000 NW 111 Ave Miami, FL 33172	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
---	--

OLD REPUBLIC GENERAL INSURANCE CORPORATION**CHANGES ADDITIONAL INSURED PRIMARY WORDING SCHEDULE**

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

THIS ENDORSEMENT MODIFIES INSURANCE PROVIDED UNDER THE FOLLOWING:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM

**Name of Additional Insured Person(s)
Or Organization(s):**

Location(s) of Covered Operations

Where required by written contract.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The insurance provided by this endorsement is primary insurance and we will not seek contribution from any other insurance of a like kind available to the person or organization shown in the schedule above unless the other insurance is provided by a contractor other than the person or organization shown in the schedule above for the same operation and job location. If so, we will share with that other insurance by the method described in paragraph 4.c. of Section IV – Commercial General Liability Conditions.

All other terms and conditions remain unchanged.

Named Insured	LEAD ENGINEERING CONTRACTORS, LLC		
Policy Number	A-4CG-113717-01	Endorsement No.	000
Policy Period	09/06/2017 to 09/06/2018	Endorsement Effective Date:	09/06/2017
Producer's Name:	OLD REPUBLIC CONTRACTORS INSURANCE AGENCY, INC.		
Producer Number:	7004		

AUTHORIZED REPRESENTATIVE

DATE

CG EN GN 0029 09 06

POLICY NUMBER: A-4CG-113717-01

COMMERCIAL GENERAL LIABILITY
CG 20 10 04 13

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – OWNERS, LESSEES OR
CONTRACTORS – SCHEDULED PERSON OR
ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location(s) Of Covered Operations
THE FLORIDA DEPARTMENT OF TRANSPORTATION 1000 NW 111 AVENUE. MIAMI, FL 33172	ANY & ALL
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

C. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or

2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

UNOFFICIAL
DOCUMENT

POLICY NUMBER: A-4CG-113717-01

COMMERCIAL GENERAL LIABILITY
CG 20 37 04 13

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – OWNERS, LESSEES OR
CONTRACTORS – COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART**SCHEDULE**

Name Of Additional Insured Person(s) Or Organization(s)	Location And Description Of Completed Operations
THE FLORIDA DEPARTMENT OF TRANSPORTATION 1000 NW 111 AVENUE. MIAMI, FL 33172	ANY & ALL
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE POLICY**WC 00 03 13**

(Ed. 4-84)

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

WHERE REQUIRED BY AN EXECUTED WRITTEN CONTRACT IN ALL STATES WHERE APPLICABLE.

UNOFFICIAL
DOCUMENT

This endorsement changes the policy to which it is attached effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective 09/06/2017 Policy No. A-4CW-113717-01 Endorsement No. 000

Insured LEAD ENGINEERING CONTRACTORS, LLC

Premium \$

Insurance Company

Countersigned by

OLD REPUBLIC GENERAL INSURANCE CORPORATION

WC 00 03 13

(Ed. 4-84)

© 1983 National Council on Compensation Insurance.

POLICY NUMBER: A-4CA-113717-01

COMMERCIAL AUTO
CA 04 44 10 13**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.****WAIVER OF TRANSFER OF RIGHTS OF RECOVERY
AGAINST OTHERS TO US (WAIVER OF SUBROGATION)**

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM
BUSINESS AUTO COVERAGE FORM
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Named Insured: LEAD ENGINEERING CONTRACTORS, LLC**Endorsement Effective Date:** 09/06/2017**SCHEDULE****Name(s) Of Person(s) Or Organization(s):**

WHERE REQUIRED BY AN EXECUTED WRITTEN CONTRACT.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The **Transfer Of Rights Of Recovery Against Others To Us** condition does not apply to the person(s) or organization(s) shown in the Schedule, but only to the extent that subrogation is waived prior to the "accident" or the "loss" under a contract with that person or organization.

POLICY NUMBER: A-4CG-113717-01

COMMERCIAL GENERAL LIABILITY
CG 24 04 05 09**WAIVER OF TRANSFER OF RIGHTS OF RECOVERY
AGAINST OTHERS TO US**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART**SCHEDULE****Name Of Person Or Organization:**

WHERE REQUIRED BY AN EXECUTED WRITTEN CONTRACT.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

**The following is added to Paragraph 8. Transfer Of
Rights Of Recovery Against Others To Us of
Section IV – Conditions:**

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.

POLICY NUMBER: A-4CG-113717-01

COMMERCIAL GENERAL LIABILITY
CG 20 37 04 13**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.****ADDITIONAL INSURED – OWNERS, LESSEES OR
CONTRACTORS – COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART**SCHEDULE**

Name Of Additional Insured Person(s) Or Organization(s)	Location And Description Of Completed Operations
The Owner and Contractor, if required by the terms of a written contract that was fully executed prior to the date of the "occurrence", and any other persons or entities specifically required by, and identified by name, in that same contract.	The Owner and Contractor, if required by the terms of a written contract that was fully executed prior to the date of the "occurrence", and any other persons or entities specifically required by, and identified by name, in that same contract.
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

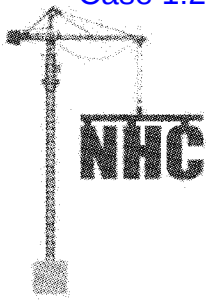
B. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

**NIELSON, HOOVER & COMPANY, INC.**

PUBLIC WORKS BOND
IN COMPLIANCE WITH FLORIDA STATUTES 255.05(1)(A)

BOND NO. 47SUR300057010004

CONTRACTOR LEAD ENGINEERING CONTRACTORS, LLC
ADDRESS 5201 BLUE LAGOON DRIVE, SUITE 590, MIAMI, FL 33126

PHONE NO. (305) 615-3272

SURETY COMPANY BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY

ADDRESS 1314 DOUGLAS STREET, SUITE 1400, OMAHA, NE 68102-1944

PHONE NO. (402) 916-3000

OWNER NAME FDOT - DISTRICT 6

ADDRESS 1000 NORTHWEST 111TH AVENUE, MIAMI, FL 33172

PHONE NO. (305) 470-5100

CONTRACT/PROJECT NO. E6K72

PROJECT NAME A CONTRACT THAT CONSISTS OF INTERSECTION IMPROVEMENTS
ALONG STATE ROAD 907/ ALTON ROAD AT MICHIGAN AVENUE

PROJECT LOCATION MIAMI-DADE COUNTY, FL

LEGAL DESCRIPTION VARIOUS
AND STREET ADDRESS

DESCRIPTION INTERSECTION IMPROVEMENTS

Front Page

All other bond page(s) are deemed subsequent to this page regardless
of any page number(s) that may be preprinted thereon.

BID SOLICITATION NOTICE – District 6
FLORIDA DEPARTMENT OF TRANSPORTATION
CONSTRUCTION AND MAINTENANCE PROGRAMS
 District Six, Adam Leigh Cann Building
 1000 NW 111 Avenue Procurement Office, Room 6202-B
 Miami, FL 33172

Miami, FL
 December 14, 2017
 Advertisement No. 01

All bids must be completed using **Project Bids** software available on the Bid Express website at <https://bidx.com/fl/main>

Unless otherwise stipulated in the proposal description, bids for all projects listed in this Bid Solicitation Notice must be submitted using Bid Express only. No other means of submission of bids will be accepted. Please visit the Contracts Administration Website at: <http://www.fdot.gov/contracts> for more information on Bid Express. Submitting bids through Bid Express requires a Digital ID. To obtain a Digital ID, please contact Bid Express at <http://www.bidx.com>. Allow up to 6 days to complete the Digital ID registration.

Bids for the projects in this Bid Solicitation Notice will be accepted by Bid Express until **11:00 AM Local Time on Thursday, January 25, 2018.**

Bid totals for each bid submitted will be read aloud for those present and will be available at **11:00 AM January 25, 2018** in the **above referenced location..** Agenda: a) Opening Remarks; b) 15 minutes of public input; c) Reading of bids; d) Closing. Anyone needing special accommodations under the Americans with Disabilities Act of 1990 should send an e-mail to: contracts.admin@dot.state.fl.us or call telephone number (305)470-5457. Special accommodation requests under the Americans with Disabilities Act should be made at least seven days prior to the public meeting. Bidders may obtain preliminary bid results at: <https://fdotwp1.dot.state.fl.us/wTBidLetting/LettingMain>, select district then click on appropriate date.

DEADLINE FOR PROPOSALS AND PROPOSAL HOLDERS LIST

The deadline for obtaining bid packages shall be 24 hours prior to the scheduled letting date and time. A list of plan holders may be obtained by visiting the District Contracts Administration website at: www.fdot.gov/contracts/d6, click "Letting and Project Information" and select letting date from the Lettings Menu. For compliance with Florida Statute 337.168(2), additional bidders and plan and specifications holders are not published beginning three working days prior to the letting.

-----NOTE-----

Proposals will not be issued after 11:00 AM Local Time on Wednesday, January 24, 2018 .

Document Ordering Information

Orders for documents are placed using the Contract Proposal Processing Online Ordering System at <https://fdotwp1.dot.state.fl.us/contractproposalprocessingonlineordering/>. There is no charge for ordering/downloading documents. Online Ordering is available Monday through Friday from 6 AM. to 9 PM. and Saturday from 6 AM. to 7 PM.

To Place An Order

- A current State of Florida Vendor Number is required prior to first-time registration; please visit http://dms.myflorida.com/egovernment/tools/myflorida_marketplace for more information. Please allow 24 to 48 hours for receipt of a new vendor number.
- Prior to placing orders, an individual shall register and establish an Internet Subscriber Account with the Department of Transportation at <https://fdotwp1.dot.state.fl.us/contractproposalprocessingonlineordering/>. Please allow 48 to 72 hours (excluding weekends and holidays) for the registration and approval.

PREQUALIFICATION

Contractors must have a current certificate of qualification in accordance with Florida Statute 337.14(1) and Rule Chapter 14-22, Florida Administrative Code, on the date of the letting to bid on construction projects over \$250,000.00 as **established by the Department's budget. Maintenance contracts do not require a contractor to have a certificate of qualification**, unless stipulated in the project description and specifications. If deemed necessary by the Department, certain maintenance contracts will contain specific requirements for maintenance contractor eligibility.

PREQUALIFIED CONTRACTORS CURRENT CAPACITY

In order for the Department to have the information required to determine a prequalified bidder's Current Capacity, it is necessary that the prequalified contractor certify the total dollar amount of all work the contractor has underway. This certification shall be accomplished electronically by submitting the Certification of Work Underway (Online Web Application) http://www.fdot.gov/contracts/PreQual_Info/prequalified.shtm to the Department every 30 calendar days.

CONFLICT OF INTEREST

A contractor who performs a constructability review on a design contract or who participates in a value engineering study workshop or cost risk analysis workshop, is prohibited from bidding on the construction of that contract.

SCRUTINIZED COMPANIES

A company that is on the Scrutinized Companies that Boycott Israel List, is engaged in a boycott of Israel, is on the Scrutinized Companies with Activities in Sudan List, is on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, may not bid on, submit a proposal for, or enter into a contract with an agency or local government entity for goods or services of \$1 million or more.

BID REJECTION

Bidders are hereby notified that all bids on any of the following projects are likely to be rejected if the lowest responsive bid received exceeds the engineer's estimate by more than ten percent (10%). In the event any of the bids are rejected for this reason, the project may be deferred for re-advertising. In addition, award of all federally funded projects will be subject to Federal Highway Administration concurrence.

PROTEST RIGHTS

Pursuant to Section 120.57, Florida Statutes, any person adversely affected by a **bid solicitation** shall file both a notice of protest and bond within 72 hours after posting of the Bid Solicitation Notice, and shall file a formal written protest within ten days after filing the notice of protest. Any person who files a notice of protest as to a bid solicitation pursuant to this rule shall post with the Department, at the time of filing the notice of protest, a bond payable to the Department in the following amounts: For an action protesting a bid solicitation that requires qualification of bidders, the bond shall be \$5,000. For an action protesting a bid solicitation for which bidders are not required to be prequalified by the Department to be eligible to bid, the bond shall be \$2,500. The required notice of protest, bond and formal protest must each be timely filed with the Clerk of Agency Proceedings, Florida Department of Transportation, Mail Station 58, Room 550, 605 Suwannee Street, Tallahassee, Florida 32399-0458, FAX (850) 414-5264. Failure to file a protest within the time prescribed in Section 120.57(3), F.S., or failure to post the bond or other security required by law within the time allowed for the filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

Pursuant to Section 120.57, Florida Statutes, any person adversely affected by a **bid rejection or contract award** shall file both a notice of protest and bond within 72 hours after the posting of the Summary of Bids. If notice of intended decision is given by certified mail or express delivery, the adversely affected person must file both the notice of protest and bond within 72 hours after receipt of the notice of intent. A formal written protest must be filed within ten days after filing the notice of protest. Any person who files a notice of protest as to a bid rejection or contract award pursuant to this rule shall post with the Department, at the time of filing the notice of protest, a bond payable to the Department in the following amounts: For an action protesting a bid rejection or contract award that requires qualification of bidders, the Bond shall be equal to one percent of the lowest bid submitted or \$5,000, whichever is greater. For an action protesting a bid rejection or contract award for which bidders are not required to be prequalified by the Department to be eligible to bid, the bond shall be \$2,500. The required notice of protest, bond, and formal protest must each be timely filed with the Clerk of Agency Proceedings, Florida Department of Transportation, Mail Station 58, Room 550, 605 Suwannee Street,

Tallahassee, Florida 32399-0458, FAX (850) 414-5264. Failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes, shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

A protest is not timely filed unless the notice of protest, bond, and the formal protest are each received by the Clerk of Agency Proceedings within the required time limits. A protest which is filed prematurely will be deemed abandoned unless timely renewed.

Interested parties can visit our Internet web site at <http://www.fdot.gov/contracts/>. Information regarding projects posted with the Clerk of Agency Proceedings, Proposal holders, Plan and Special Provisions holders, preliminary letting results, and other noteworthy information is provided on this website. Please note that, for compliance with Florida Statute 337.168(2), the Proposal holder and the Plan and Special Provision holder listings are not published beginning three working days prior to the letting until after the letting.

In the event multiple responsive bidders submit identical proposals (bids), the Department will determine the order in which proposals are to be considered for Contract award in accordance with Florida Laws, and any applicable Rules.

INSURANCE

The successful bidder shall submit current general liability insurance and workman's compensation insurance certificates for the duration of the contract in the dollar amounts and manner specified in the most current edition of the Department's Standard Specifications for Road and Bridge Construction. Insurance companies must be authorized to do business in the State of Florida. Proof of such insurance shall be filed with the District Contracts and Procurement Office before the contract can be executed. BE SURE THAT THE CONTRACT NUMBER IS ON EACH INSURANCE CERTIFICATE.

ADDENDA

No negotiations, decisions, or actions will be initiated or executed by a potential bidder as a result of any oral discussion with a State employee. Only those communications which are in writing from the Department will be considered as a duly authorized expression on behalf of the Department. Notices of changes (addenda) will be posted on the Districts Contracts Administration website at: www.fdot.gov/contracts/d6, click "Letting and Project Information" and select letting date from the Lettings Menu. It is the responsibility of all potential bidders to monitor this site for any changing information prior to submitting their bid. **All addenda will be acknowledged by signature and subsequent submission of addenda with the bid when so stated in the addenda.**

BID QUESTIONS

Direct questions regarding the advertised projects by posting them to the Department website at the following URL address: <https://fdotwp1.dot.state.fl.us/BidQuestionsAndAnswers/Proposal.aspx/SearchProposal>.

PROPOSAL GUARANTY

For bids over \$150,000.00, the standard proposal guaranty of 5% of the bid will be required, unless otherwise stipulated in the proposal advertisement. A Proposal Guaranty of not less than five percent (5%) of the total actual bid in the form of either a certified check, cashier's check, trust company treasurer's check, bank draft of any national or state bank, or a Surety Proposal Guaranty made payable to the Florida Department of Transportation must be received for each bid in excess of \$150,000.00. A check or draft in an amount less than five percent (5%) of the actual bid will invalidate the bid. The guaranty amount shall include all bid items except construction days for A+B bidding and lane closure for Lane Rental Bidding. Proposal Guaranty shall substantially conform to DOT Form 375-020-09 furnished with the Proposal. Surety2000 or SurePath electronic Proposal Guaranty submittal may be used in conjunction with Bid Express internet bid submittal. For more information please visit <http://www.surety2000.com> for Surety2000 or <http://www.insurevision.com> for SurePath. Paper Proposal Guaranty will also be accepted for bids submitted through Bid Express provided they are received prior to the deadline for receiving bids, by the location(s) identified in this Bid Solicitation Notice. If an electronic proposal guaranty is not being submitted, the bidder must submit an original proposal guaranty. (A fax or a copy sent as an attachment will not be accepted.)

EXECUTION OF CONTRACT

Pursuant to Subsections 3-6 and 3-7 of the Standard Specifications, the successful bidder shall execute the necessary contract documents and return the agreement along with a satisfactory Performance and Payment Bond within ten (10) Calendar days of award, excluding Saturdays, Sundays, and state holidays, unless noted otherwise in the project specifications. A 100% Payment and Performance Bond will be required for all projects unless noted otherwise in the project specifications. All work is to be done in accordance with the Plans, special Provisions of the State of Florida Department of Transportation.

Prior to execution of the contract with the Department, **a corporation must show proof that it is authorized to do business in the State of Florida.** Florida corporations should provide a copy of the certificate of Incorporation and foreign corporations should provide a copy of Certificate of Authority from the Florida Department of State.

Important Note: Actual commitment and final execution of the contract is contingent upon an approved legislative budget and funds availability.

DBE PARTICIPATION

Disadvantaged Business Enterprise (DBE) Availability Goal Information is contained in the Bid Solicitation Package. DBE Participation and Bidder Opportunity List for Prime Contractors should be reported in the **Equal Opportunity Compliance (EOC)** system. The EOC system is a web based application for Prime Contractors, statewide, to report their Bidder Opportunity List, DBE Commitments, and DBE/MBE Subpayments. Please complete and submit the DBE Participation (i.e. DBE Commitments) and Bid Opportunity List in the EOC.

More information regarding EOC can be referenced at: <http://www.fdot.gov/equalopportunity/eoc.shtm>

DEBARMENT/SUSPENSION

All bids submitted to the Department shall include a statement that by signing and submitting this proposal, the bidder certifies that no principal (which includes officers, directors or executives) is presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any federal department or agency.

MANDATORY PRE-BID CONFERENCE

For projects with mandatory Pre-Bid Meeting, proposals (BIDDING DOCUMENTS) will be issued only to the attendees of the meeting. Prospective bidders ordering bidding documents prior to the Pre-Bid Meeting will be given access to download the bidding documents within 24 hours after the Pre-Bid Meeting. Those prospective bidders ordering the documents after the Pre-Bid Meeting will need to contact the office advertising the project to confirm attendance and receive access to download the bidding documents. Please contact the office at least two working days prior to the deadline for obtaining bidding documents to allow time for processing.

LATE ARRIVALS TO MANDATORY PRE-BID MEETINGS

All bidders must be present and signed in prior to the start of the mandatory pre-bid meeting. Anyone not signed in at the commencement of the meeting will be considered late and will not be allowed to bid on the project.

FIRST TIME BIDDERS

Bidders bidding for the first time with the Department can access the New Bidder's Orientation document at: http://www.fdot.gov/contracts/CPP_Online_Ordering/NEW%20BIDDERS%20ORIENTATION.pdf

POSTING NOTICE

The bid tabulation and intent to award will be posted on **February 06, 2018** or **February 20, 2018** at www.fdot.gov/contracts/d6, click the "Letting and Project Information" and select letting date from the Listings Menu. The posting provides notice of the Department's intent to award a contract or reject all bids. The Department's Notice of Intent regarding a project will be posted on only one of the alternate posting dates. Bidders are solely responsible for timely monitoring or otherwise verifying on which of the specified alternate posting dates the posting of award or rejection of all bids actually occurs.

If the posting dates are revised, all bidders for the subject project will be notified.

AFFIRMATIVE ACTION (EQUAL EMPLOYMENT OPPORTUNITY)

The Florida Department of Transportation (hereinafter referred to as the "Department"), in accordance with Title VI of the Civil Rights Act of 1964, 42 USC 2000d to 2000d-4 and related authorities, Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation issued pursuant to such Act, hereby notifies all bidders that the Department will affirmatively insure that in any contract entered into pursuant to this advertisement, minority and disadvantaged business enterprises will be afforded the full opportunity to submit bids in response to this invitation and will not be discriminated against on the basis of race, color, national origin, or sex in consideration for an award. Further, it is the policy of the Department to not discriminate against bidders on the grounds of race, color, national origin, religion, sex, age, or disability/handicap in consideration for an award. A bidder must have an approved DBE Affirmative Action (DBE/AA) Plan prior to contract award. Please use the following link

http://www.fdot.gov/contracts/cpp_online_ordering/bidder_assist.shtm, Standard Specifications for Road and Bridge Construction and the Special Provisions for instructions for submission of a DBE/AA Plan. The DBE/AA Plan should be submitted for approval prior to the bidding.

MINIMUM WAGE

The minimum wage for all hours worked in Florida is available at <http://www.floridajobs.org>.

EMAIL SUBSCRIPTION LIST

To get on the e-mail subscription list, go to <http://www2.dot.state.fl.us/ContractsAdministration/bsnmail.asp> and fill out the necessary information to "Subscribe". To obtain information concerning other districts, go to <http://www.fdot.gov/contracts/distco.shtm>.

NOTICE TO ALL BIDDERS

To report bid rigging activities call: 1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 A.M. to 5:00 P.M. Local Time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities. The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

By submitting a bid, the contractor/consultant/vendor agrees to comply with section 20.055(5).Florida Statute, and to incorporate in all subcontracts the obligation to comply with section 20.055(5) Florida Statute.

**Florida Department of Transportation
Notice to Contractors Index**

Published: December 14, 2017

Letting ID: 06180125

Please use the following proposal ID and the letting ID when ordering plans/proposal or specifications for the January 25, 2018 letting.

Page Number	Proposal Id	Proposal Notes	Fin Proj Numbers	County
7	E6K72		43652215201(*)	MIAMI-DADE

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DOCUMENT

Proposal Note Codes:

Note: () indicates lead project*

Bid Solicitation Notice - Notice to Contractors Index

Page 6

Florida Department of Transportation
Bid Solicitation Notice and Approximate Quantities

Letting:	06180125	Call Order: 003	Proposal: E6K72	District: 06
Counties:	MIAMI-DADE			
Road Name:	SR A1A/MACARTHUR CSWY			
Limits:	SR A1A/MACARTHUR CAUSEWAY EAST BRIDGE # 870077			
Project(s):	43652215201(*)	Federal Aid No: N/A		
Total Roadway Length:	0.416 Miles	Contract Days:	740	
Total Bridge Length:	0.408 Miles	Letting Date:	01/25/18	
Total Proposal Length:	0.824 Miles	Contract Execution Days:	10	
		Special Start Date:	N/A	
		Aquis/Flexible Start Time:	30	

Proposal Budget Estimate: \$12,025,802.00

Please read the full advertisement

Description:

Electronic bids are requested for a contract that consists of Bridge Repair and/or Rehabilitation along State Road A1A/Macarthur Causeway East Bridge # 870077. Prequalification is required.

* Special Note: Beginning September 1, 2017, Contractors must download and use the new bid preparation application AASHTOWARE Project Bids™ available through Bid Express. This bid must be submitted through Bid Express and all attachments must be in a zip format. Hard copy bids will not be considered.

**** BID BONDS**

Please submit Bid Bonds using Surety 2000 or SurePath electronic bid bond submittal in conjunction with Bid Express internet bid submittal or provide an original paper Bid Bond prior to the deadline for receiving bids. Do not submit Bid Bonds as an attachment.

Visit www.bidx.com for more information.

Call Order: 003 Proposal: E6K72

ALT	Item	Description	Unit	Quantity
Section 0001 Structures				
	0110- 12- 1	HYDRODEMOLITION, REMOVAL OF DECK SURFACE	SY	18,200.000
	0110- 82-	REMOVE & DISPOSE OF STRUCTURAL TIMBER	MB	0.800
	0400- 4- 4	CONCRETE CLASS IV, SUPERSTRUCTURE	CY	1,884.000
	0400- 4- 5	CONCRETE CLASS IV, BRIDGE SUBSTRUCTURE	CY	35.000
	0400- 8-106	CONCRETE CLASS V, MICROSILICA SUBSTRUCTURE	CY	34.000
	0400-142- 3	CATHODIC PROTECTION SYSTEM, ZINC ALUMINUM SPRAY	SF	9,572.000
	0400-143-	CLEANING & COATING CONCRETE SURFACE, CLASS 5	SF	64,655.000
	0401- 70- 2	RESTORE SPALLED AREAS, LATEX MODIFIED MORTAR- STYRENE BUTADIENE	CF	2,967.000
	0411- 1-	EPOXY MATERIAL FOR CRACK INJECTION- STRUCTURES REHAB	GA	28.000
	0411- 2-	CRACKS INJECT & SEAL- STRUCTURES REHAB	LF	270.000
	0415- 1- 4	REINFORCING STEEL - BRIDGE SUPERSTRUCTURE	LB	12,360.000
	0415- 1- 5	REINFORCING STEEL- BRIDGE SUBSTRUCTURE	LB	24,000.000
	0415- 1- 6	REINFORCING STEEL- MISCELLANEOUS	LB	24,237.000
	0450- 82-	BEAM REPAIR	LF	1,548.000
	0450- 83- 1	BEAM REPAIR, STRAND SPLICES	EA	124.000
	0455- 76-	WRAP PILE CLUSTERS	EA	230.000
	0455- 81-102	CATHODIC PROTECTION, F&I, PIER, ZINC ANODE ASSEMBLY	EA	62.000

Call Order: 003 Proposal: E6K72

ALT	Item	Description	Unit	Quantity
	0457- 2-221	CATHODIC PROTECTION INTEGRAL PILE JACKET, STRUCTURAL, 16.1-30.", GALVANIC SYSTEM	LF	478.000
	0458- 1- 21	BRIDGE DECK EXPANSION JOINT, REHABILITATION, POURED JOINT WITH BACKER ROD	LF	3,662.000
	0460- 1- 2	STRUCT STEEL, REHAB, LOW ALLOY	LB	384.000
	0470- 1-	TREATED TIMBER, STRUCTURAL	MB	1.000
	0510- 1-	NAVIGATION LIGHTS- FIXED BRIDGE, SYSTEM (43652215201)	LS	1.000
	0561- 1-	COATING EXISTING STRUCTURAL STEEL (43652215201)	LS	1.000
	0999- 25-	INITIAL CONTINGENCY AMOUNT, DO NOT BID (43652215201)	LS	1.000
Section 0002 Roadway				
	0101- 1-	MOBILIZATION (43652215201)	LS	1.000
	0102- 1-	MAINTENANCE OF TRAFFIC (43652215201)	LS	1.000
	0102- 14-	TRAFFIC CONTROL OFFICER	HR	1,120.000
	0102- 60-	WORK ZONE SIGN	ED	9,000.000
	0102- 71- 14	TEMPORARY BARRIER, F & I, TYPE K	LF	1,000.000
	0102- 71- 24	TEMPORARY BARRIER, RELOCATE, TYPE K	LF	20,690.000
	0102- 74- 1	CHANNELIZING DEVICE- TYPES I, II, DI, VP, DRUM, OR LCD	ED	30,600.000
	0102- 74- 2	CHANNELIZING DEVICE, TYPE III, 6'	ED	440.000
	0102- 76-	ARROW BOARD / ADVANCE WARNING ARROW PANEL	ED	780.000
	0102- 78-	TEMPORARY RETROREFLECTIVE PAVEMENT MARKER	EA	268.000
	0102- 89- 1	TEMPORARY CRASH CUSHION, REDIRECTIVE OPTION	LO	6.000
	0102- 99-	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	808.000
	0102-911- 1	PAVEMENT MARKING REMOVABLE TAPE, WHITE OR BLACK, SKIP	LF	9,530.000
	0102-911- 2	PAVEMENT MARKING REMOVABLE TAPE, WHITE OR BLACK,SOLID	LF	29,791.000
	0102-912- 2	PAVEMENT MARKING REMOVABLE TAPE, YELLOW, SOLID	LF	15,186.000
	0104- 11-	FLOATING TURBIDITY BARRIER	LF	1,200.000
	0327- 70- 1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	300.000
	0337- 7- 82	ASPHALT CONCRETE FRICTION COURSE,TRAFFIC C, FC-9.5, PG 76-22	TN	16.500
	0710- 11-101	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID, 6"	GM	1.670
	0710- 11-102	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID FOR INTERCHANGE AND URBAN ISLAND, 8"	GM	0.200
	0710- 11-131	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SKIP, 10-30 OR 3-9 SKIP, 6" WIDE	GM	3.160
	0710- 11-160	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, MESSAGE OR SYMBOL	EA	4.000
	0710- 11-170	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, ARROWS	EA	4.000
	0710- 11-201	PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SOLID, 6"	GM	1.640
Section 0003 Signing				
	0706- 3-	RETRO-REFLECTIVE PAVEMENT MARKERS	EA	250.000
	0710- 90-	PAINTED PAVEMENT MARKINGS, FINAL SURFACE (43652215201)	LS	1.000
	0711- 11-124	THERMOPLASTIC, STANDARD, WHITE, SOLID, 18" FOR DIAGONALS AND CHEVRONS	LF	35.000
	0711- 14-560	THERMOPLASTIC, PREFORMED, WHITE WITH BLACK CONTRAST ON CONCRETE PAVEMENT, MESSAGE OR SYMBOL	EA	5.000
	0711- 14-570	THERMOPLASTIC, PREFORMED, WHITE WITH BLACK CONTRAST, ARROW ON CONCRETE SURFACE	EA	5.000
	0713-103-101	PERMANENT TAPE, WHITE, SOLID, 6" FOR CONCRETE BRIDGES	GM	0.835

Call Order: 003 Proposal: E6K72

ALT	Item	Description	Unit	Quantity
	0713-103-102	PERMANENT TAPE, WHITE, SOLID, 8" EXIT LANE AT INTERCHANGE ON CONCRETE PAVEMENT	GM	0.100
	0713-103-131	PERMANENT TAPE, WHITE, SKIP/DOTTED, 6" FOR CONCRETE SURFACES	GM	1.579
	0713-103-201	PERMANENT TAPE, YELLOW, SOLID, 6" FOR CONCRETE BRIDGES	GM	0.819
	0713-103-331	PERMANENT TAPE, BLACK, SKIP/DOTTED, 6" FOR CONCRETE SURFACES	GM	1.579

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**WORKFORCE AND EMPLOYMENT
OPPORTUNITIES OFFICES**

To obtain the addresses, phone numbers, fax numbers and e-mail addresses of your local workforce employment partner, please visit the following website:

www.floridajobs.org

**BITUMINOUS MATERIAL
GASOLINE AND DIESEL FUELS AND
NATURAL GAS PRICE INDEX**

To obtain information on Bituminous Material Gasoline and Diesel Fuels and Natural Gas Price Index, please visit the following website (click on More... under Most Requested and choose Asphalt Price Index):

www.dot.state.fl.us/cc-admin

Florida Department of Transportation
web Trnsport
Fuel Allocation Report

12/11/2017 4:52:35 PM

**ESTIMATED FUEL ALLOCATION DETAIL**

Proposal No.:		E6K72	Project No.:	43652215201 *	Item Year:	13	District:	06	County/Section:		87060000
Item No.	Alt.	Unit	Pay Item Description	Conversion Factors		Quantity	Gallons				
				Gasoline	Diesel		Gasoline	Diesel			
0327- 70- 1		SY	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	0.0005	0.0636	300.000	0.150			19.080	
0337- 7- 82		TN	ASPHALT CONCRETE FRICTION COURSE,TRAFFIC C, FC-9.5, PG 76-22	0.0619	3.2816	16.500	1.021			54.146	
0400- 4- 4		CY	CONCRETE CLASS IV, SUPERSTRUCTURE	7.9567	6.1992	1,884.000	14,990.423			11,679.293	
0400- 4- 5		CY	CONCRETE CLASS IV, BRIDGE SUBSTRUCTURE	11.7368	4.8539	35.000	410.788			169.887	
0400- 8-106		CY	CONCRETE CLASS V, MICRO SILICA SUBSTRUCTURE	11.7368	4.8539	34.000	399.051			165.033	
0415- 1- 4		LB	REINFORCING STEEL - BRIDGE SUPERSTRUCTURE	0.0018	0.0008	12,360.000	22.248			9.888	
0415- 1- 5		LB	REINFORCING STEEL- BRIDGE SUBSTRUCTURE	0.0018	0.0008	24,000.000	43.200			19.200	
0415- 1- 6		LB	REINFORCING STEEL- MISCELLANEOUS	0.0030	0.0009	24,237.000	72.711			21.813	
0460- 1- 2		LB	STRUCT STEEL, REHAB, LOW ALLOY	0.0006	0.0033	384.000	0.230			1.267	
43652215201 JOB TOTAL:							15,939.823			12,139.607	

In preparing bids for this project, the Department of Transportation will make contract price adjustment for gasoline and diesel fuels in accordance with the provisions contained in this contract.

FuelAllocationReport

Page 3 of 6

(*) Indicates lead project

Florida Department of Transportation

Proposal Of

Vendor ID : **F812774010** **Lead Engineering Contractors, LLC.**
Address : 5201 Blue Lagoon Drive, Suite 590
Miami FL 33126
Phone : 305-615-3272 Fax: 305-3283
Email : mgonzalez@lead-ec.com
StateIncorp: Florida (FL)

Letting : 06180125 Letting Date: 01/25/2018
Proposal : E6K72 Call Order: 003
Amendments: 2 Contract Days: 740 AD

STANDARD BID AMOUNT(A) : \$ **12,962,183.16**
TIME BID AMOUNT(B) : \$ **0.00**

=====

TOTAL BID AMOUNT: \$ **12,962,183.16** Bid Errors: **False**

Contract Time Site: 00 Bid Days: Cost PerDay: 0
Site: Bid Days: Cost PerDay:

Lead Project: 43652215201 Federal Aid#: N/A
Project(s): 43652215201,,,
Counties : MIAMI-DADE,,,

Is File Attached? **NO**
File Name:
Fuel Adjustment:

Proposal Description

LETTING LOCATION: Florida Department of Transportation-D6,
POSTING DATES: 02/06/2018 and 02/20/2018
CONTRACT DAYS: 740
CONTRACT EXECUTION DAYS: 10
SPECIAL START DATE: N/A
ACQUIS./FLEXIBLE START TIME: 30
Electronic bids are requested for a contract that consists
of Bridge Repair and/or Rehabilitation along State Road
A1A/Macarthur Causeway East Bridge # 870077.
Prequalification is required. * Special Note: Beginning
September 1, 2017, Contractors must download and use the
new bid preparation application AASHTOWARE Project Bids?
available through Bid Express. This bid must be submitted
through Bid Express and all attachments must be in a zip
format. Hard copy bids will not be considered. ** BID BONDS
Please submit Bid Bonds using Surety 2000 or SurePath
electronic bid bond submittal in conjunction with Bid

Express internet bid submittal or provide an original paper Bid Bond prior to the deadline for receiving bids. Do not submit Bid Bonds as an attachment. Visit www.bidx.com for more information.

Bid Errors: **False**

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Contract Schedule of Items

Contract ID : E6K72
Date of Letting : January 25, 2018
Call Order : 003
District : District 6
Counties : MIAMI-DADE
Awarded Vendor : F812774010
LEAD ENGINEERING CONTRACTORS,
LLC
Awarded Amount : \$12,962,183.16

Project (s) : **Fed Aid Num (s) :**
43652215201 (*)

Description :
Contract Days : 740
Contract Execution Days : 10
Special Start Time : N/A
Acquis./Flexible Start Time : 30

It is understood and agreed that the date on which calendar days will begin to be charged to the project shall be:

- (a) either 1) 30 (calendar days) from the date of issuance of
or 2) the date on which the Contractor actually begins work which
ever date is earlier, or
- (b) Special Start Date as specified in the proposal description, or
- (c) Anytime after the date specified in the proposal description

Contract ID: E6K72

SR A1A/MACARTHUR CSWY

Time ID	Completion Date or Number of Units	Min/Max	Unit Type	Time Type	Liquidated Damages Rate	Contract Time Flag
00	740	/	Days	AD	1.00 Days	✓

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Florida Department of Transportation

03/02/2018

Contract Schedule

Page 1 of 8

Contract ID: E6K72

Lead Project: 43652215201

Fed Aid Num: N/A

Awarded Vendor: F812774010

LEAD ENGINEERING CONTRACTORS, LLC

SECTION 0001 Structures

\$10,768,954.50

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0005	0110 12 1 HYDRODEMOLITION, REMOVAL OF DECK SURFACE	18,200.000 SY	\$90.00000	\$1,638,000.00
0010	0110 82 REMOVE & DISPOSE OF STRUCTURAL TIMBER	0.800 MB	\$15,000.00000	\$12,000.00
0015	0400 4 4 CONCRETE CLASS IV, SUPERSTRUCTURE	1,884.000 CY	\$800.00000	\$1,507,200.00
0020	0400 4 5 CONCRETE CLASS IV, BRIDGE SUBSTRUCTURE	35.000 CY	\$1,300.00000	\$45,500.00
0023	0400 7 BRIDGE DECK GROOVING, LESS THAN 8.5"	18,250.000 SY	\$4.00000	\$73,000.00
0025	0400 8106 CONCRETE CLASS V, MICROSILICA SUBSTRUCTURE	34.000 CY	\$8,500.00000	\$289,000.00
0030	0400142 3 CATHODIC PROTECTION SYSTEM, ZINC ALUMINUM SPRAY	9,572.000 SF	\$130.00000	\$1,244,360.00
0035	0400143 CLEANING & COATING CONCRETE SURFACE, CLASS 5	64,655.000 SF	\$1.20000	\$77,586.00
0040	0401 70 2 RESTORE SPALLED AREAS, LATEX MODIFIED MORTAR- STYRENE BUTADIENE	2,967.000 CF	\$750.00000	\$2,225,250.00
0045	0411 1 EPOXY MATERIAL FOR CRACK INJECTION- STRUCTURES REHAB	28.000 GA	\$160.00000	\$4,480.00
0050	0411 2 CRACKS INJECT & SEAL- STRUCTURES REHAB	270.000 LF	\$150.00000	\$40,500.00



Florida Department of Transportation

03/02/2018

Contract Schedule

Page 2 of 8

Contract ID: E6K72 Lead Project: 43652215201 Fed Aid Num: N/A

Awarded Vendor: F812774010 LEAD ENGINEERING CONTRACTORS, LLC

SECTION 0001 Structures \$10,768,954.50

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0055	0415 1 4 REINFORCING STEEL - BRIDGE SUPERSTRUCTURE	12,360.000 LB	\$1.50000	\$18,540.00
0060	0415 1 5 REINFORCING STEEL- BRIDGE SUBSTRUCTURE	24,000.000 LB	\$1.50000	\$36,000.00
0065	0415 1 6 REINFORCING STEEL- MISCELLANEOUS	24,237.000 LB	\$1.50000	\$36,355.50
0070	0450 82 BEAM REPAIR	1,548.000 LF	\$400.00000	\$619,200.00
0075	0450 83 1 BEAM REPAIR, STRAND SPLICES	124.000 EA	\$5,000.00000	\$620,000.00
0080	0455 76 WRAP PILE CLUSTERS	230.000 EA	\$3,500.00000	\$805,000.00
0085	0455 81102 CATHODIC PROTECTION, F&I, PIER, ZINC ANODE ASSEMBLY	62.000 EA	\$4,900.00000	\$303,800.00
0090	0457 2221 CATHODIC PROTECTION INTEGRAL PILE JACKET, STRUCTURAL, 16.1-30.", GALVANIC SYSTEM	478.000 LF	\$800.00000	\$382,400.00
0095	0458 1 21 BRIDGE DECK EXPANSION JOINT, REHABILITATION, POURED JOINT WITH BACKER ROD	3,662.000 LF	\$20.50000	\$75,071.00
0100	0460 1 2 STRUCT STEEL, REHAB, LOW ALLOY	384.000 LB	\$93.00000	\$35,712.00
0105	0470 1 TREATED TIMBER, STRUCTURAL	1.000 MB	\$50,000.00000	\$50,000.00
0110	0510 1 NAVIGATION LIGHTS- FIXED BRIDGE, SYSTEM 43652215201	LUMP SUM		\$55,000.00



Florida Department of Transportation

03/02/2018

Contract Schedule

Page 3 of 8

Contract ID: E6K72

Lead Project: 43652215201

Fed Aid Num: N/A

Awarded Vendor: F812774010

LEAD ENGINEERING CONTRACTORS, LLC

SECTION 0001 Structures

\$10,768,954.50

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0115	0561 1 COATING EXISTING STRUCTURAL STEEL 43652215201	LUMP SUM		\$425,000.00
0120	0999 25 INITIAL CONTINGENCY AMOUNT, DO NOT BID 43652215201	LUMP SUM		\$150,000.00

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Florida Department of Transportation

03/02/2018

Contract Schedule

Page 4 of 8

Contract ID: E6K72

Lead Project: 43652215201

Fed Aid Num: N/A

Awarded Vendor: F812774010

LEAD ENGINEERING CONTRACTORS, LLC

SECTION 0002 Roadway

\$2,125,186.66

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0125	0101 1 MOBILIZATION 43652215201	LUMP SUM		\$1,300,000.00
0130	0102 1 MAINTENANCE OF TRAFFIC 43652215201	LUMP SUM		\$175,977.56
0135	0102 14 TRAFFIC CONTROL OFFICER	1,120.000 HR	\$40.00000	\$44,800.00
0140	0102 60 WORK ZONE SIGN	9,000.000 ED	\$0.35000	\$3,150.00
0145	0102 71 14 TEMPORARY BARRIER, F&I, TYPE K	1,000.000 LF	\$80.00000	\$80,000.00
0150	0102 71 24 TEMPORARY BARRIER, RELOCATE, TYPE K	20,690.000 LF	\$15.00000	\$310,350.00
0155	0102 74 1 CHANNELIZING DEVICE- TYPES I, II, DI, VP, DRUM, OR LCD	30,600.000 ED	\$0.25000	\$7,650.00
0160	0102 74 2 CHANNELIZING DEVICE, TYPE III, 6'	440.000 ED	\$0.30000	\$132.00
0165	0102 76 ARROW BOARD / ADVANCE WARNING ARROW PANEL	780.000 ED	\$4.75000	\$3,705.00
0170	0102 78 TEMPORARY RETROREFLECTIVE PAVEMENT MARKER	268.000 EA	\$3.00000	\$804.00
0175	0102 89 1 TEMPORARY CRASH CUSHION, REDIRECTIVE OPTION	60.000 LO	\$600.00000	\$36,000.00
0180	0102 99 PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	808.000 ED	\$50.00000	\$40,400.00



Florida Department of Transportation

03/02/2018

Contract Schedule

Page 5 of 8

Contract ID: E6K72 **Lead Project:** 43652215201 **Fed Aid Num:** N/A
Awarded Vendor: F812774010 LEAD ENGINEERING CONTRACTORS, LLC
SECTION **0002** **Roadway** **\$2,125,186.66**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0185	0102911 1 PAVEMENT MARKING REMOVABLE TAPE, WHITE OR BLACK, SKIP	9,530.000 LF	\$1.70000	\$16,201.00
0190	0102911 2 PAVEMENT MARKING REMOVABLE TAPE, WHITE OR BLACK,SOLID	29,791.000 LF	\$1.50000	\$44,686.50
0195	0102912 2 PAVEMENT MARKING REMOVABLE TAPE, YELLOW, SOLID	15,186.000 LF	\$1.60000	\$24,297.60
0200	0104 11 FLOATING TURBIDITY BARRIER	1,200.000 LF	\$25.00000	\$30,000.00
0205	0327 70 1 MILLING EXIST ASPH PAVT, 1" AVG DEPTH	300.000 SY	\$2.00000	\$600.00
0210	0337 7 82 ASPHALT CONCRETE FRICTION COURSE,TRAFFIC C, FC-9.5, PG 76-22	16.500 TN	\$100.00000	\$1,650.00
0215	0710 11101 PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID, 6"	1.670 GM	\$900.00000	\$1,503.00
0220	0710 11102 PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID FOR INTERCHANGE AND URBAN ISLAND, 8"	0.200 GM	\$1,400.00000	\$280.00
0225	0710 11131 PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SKIP, 10-30 OR 3-9 SKIP, 6" WIDE	3.160 GM	\$400.00000	\$1,264.00
0230	0710 11160 PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, MESSAGE OR SYMBOL	4.000 EA	\$35.00000	\$140.00
0235	0710 11170 PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, ARROWS	4.000 EA	\$30.00000	\$120.00



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Contract Schedule

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Contract ID: E6K72

Lead Project: 43652215201

Fed Aid Num: N/A

Awarded Vendor: F812774010

LEAD ENGINEERING CONTRACTORS, LLC

SECTION 0002 Roadway

\$2,125,186.66

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0240	0710 11201 PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SOLID, 6"	1.640 GM	\$900.00000	\$1,476.00

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Florida Department of Transportation

03/02/2018

Contract Schedule

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Contract ID: E6K72 Lead Project: 43652215201 Fed Aid Num: N/A

Awarded Vendor: F812774010 LEAD ENGINEERING CONTRACTORS, LLC

SECTION 0003 Signing \$68,042.00

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0245	0706 3 RETRO-REFLECTIVE PAVEMENT MARKERS	250.000 EA	\$2.75000	\$687.50
0250	0710 90 PAINTED PAVEMENT MARKINGS, FINAL SURFACE 43652215201	LUMP SUM		\$3,500.00
0255	0711 11124 THERMOPLASTIC, STANDARD, WHITE, SOLID, 18" FOR DIAGONALS AND CHEVRONS	35.000 LF	\$2.00000	\$70.00
0260	0711 14560 THERMOPLASTIC, PREFORMED, WHITE WITH BLACK CONTRAST ON CONCRETE PAVEMENT, MESSAGE OR SYMBOL	5.000 EA	\$700.00000	\$3,500.00
0265	0711 14570 THERMOPLASTIC, PREFORMED, WHITE WITH BLACK CONTRAST, ARROW ON CONCRETE SURFACE	5.000 EA	\$450.00000	\$2,250.00
0270	0713103101 PERMANENT TAPE, WHITE, SOLID, 6" FOR CONCRETE BRIDGES	0.835 GM	\$20,000.00000	\$16,700.00
0275	0713103102 PERMANENT TAPE, WHITE, SOLID, 8" EXIT LANE AT INTERCHANGE ON CONCRETE PAVEMENT	0.100 GM	\$20,000.00000	\$2,000.00
0280	0713103131 PERMANENT TAPE, WHITE, SKIP/DOTTED, 6" FOR CONCRETE SURFACES	1.579 GM	\$7,000.00000	\$11,053.00
0285	0713103201 PERMANENT TAPE, YELLOW, SOLID, 6" FOR CONCRETE BRIDGES	0.819 GM	\$22,000.00000	\$18,018.00
0290	0713103331 PERMANENT TAPE, BLACK, SKIP/DOTTED, 6" FOR CONCRETE SURFACES	1.579 GM	\$6,500.00000	\$10,263.50

Total Bid: \$12,962,183.16



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Approximate Quantities

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Proposal ID: E6K72

Call Order: 003

Letting: 06180125

Letting Date: 01/25/2018

Section 0001 Structures

Alt	Item ID	Item Description	Unit	Quantity
	0110 12 1	HYDRODEMOLITION, REMOVAL OF DECK SURFACE	SY	18,200.000
	0110 82	REMOVE & DISPOSE OF STRUCTURAL TIMBER	MB	0.800
	0400 4 4	CONCRETE CLASS IV, SUPERSTRUCTURE	CY	1,884.000
	0400 4 5	CONCRETE CLASS IV, BRIDGE SUBSTRUCTURE	CY	35.000
	0400 7	BRIDGE DECK GROOVING, LESS THAN 8.5"	SY	18,250.000
	0400 8106	CONCRETE CLASS V, MICROSILICA SUBSTRUCTURE	CY	34.000
	0400142 3	CATHODIC PROTECTION SYSTEM, ZINC ALUMINUM SPRAY	SF	9,572.000
	0400143	CLEANING & COATING CONCRETE SURFACE, CLASS 5	SF	64,655.000
	0401 70 2	RESTORE SPALLED AREAS, LATEX MODIFIED MORTAR-STYRENE BUTADIENE	CF	2,967.000
	0411 1	EPOXY MATERIAL FOR CRACK INJECTION- STRUCTURES REHAB	GA	28.000
	0411 2	CRACKS INJECT & SEAL- STRUCTURES REHAB	LF	270.000
	0415 1 4	REINFORCING STEEL - BRIDGE SUPERSTRUCTURE	LB	12,360.000
	0415 1 5	REINFORCING STEEL- BRIDGE SUBSTRUCTURE	LB	24,000.000
	0415 1 6	REINFORCING STEEL- MISCELLANEOUS	LB	24,237.000
	0450 82	BEAM REPAIR	LF	1,548.000
	0450 83 1	BEAM REPAIR, STRAND SPLICES	EA	124.000
	0455 76	WRAP PILE CLUSTERS	EA	230.000
	0455 81102	CATHODIC PROTECTION, F&I, PIER, ZINC ANODE ASSEMBLY	EA	62.000
	0457 2221	CATHODIC PROTECTION INTEGRAL PILE JACKET, STRUCTURAL, 16.1-30.", GALVANIC SYSTEM	LF	478.000
	0458 1 21	BRIDGE DECK EXPANSION JOINT, REHABILITATION, POURED JOINT WITH BACKER ROD	LF	3,662.000
	0460 1 2	STRUCT STEEL, REHAB, LOW ALLOY	LB	384.000
	0470 1	TREATED TIMBER, STRUCTURAL	MB	1.000
	0510 1	NAVIGATION LIGHTS- FIXED BRIDGE, SYSTEM 43652215201	LS	1.000
	0561 1	COATING EXISTING STRUCTURAL STEEL 43652215201	(TN)	276.000
	0999 25	INITIAL CONTINGENCY AMOUNT, DO NOT BID 43652215201	LS	1.000

Section 0002 Roadway

Alt	Item ID	Item Description	Unit	Quantity
	0101 1	MOBILIZATION 43652215201	LS	1.000
	0102 1	MAINTENANCE OF TRAFFIC 43652215201	(DA)	740.000
	0102 14	TRAFFIC CONTROL OFFICER	HR	1,120.000
	0102 60	WORK ZONE SIGN	ED	9,000.000

UNIT () - Indicates bid as lump sum



Florida Department of Transportation

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Approximate Quantities

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Proposal ID: E6K72

Call Order: 003

Letting: 06180125

Letting Date: 01/25/2018

Alt	Item ID	Item Description	Unit	Quantity
	0102 71 14	TEMPORARY BARRIER, F&I, TYPE K	LF	1,000.000
	0102 71 24	TEMPORARY BARRIER, RELOCATE, TYPE K	LF	20,690.000
	0102 74 1	CHANNELIZING DEVICE- TYPES I, II, DI, VP, DRUM, OR LCD	ED	30,600.000
	0102 74 2	CHANNELIZING DEVICE, TYPE III, 6'	ED	440.000
	0102 76	ARROW BOARD / ADVANCE WARNING ARROW PANEL	ED	780.000
	0102 78	TEMPORARY RETROREFLECTIVE PAVEMENT MARKER	EA	268.000
	0102 89 1	TEMPORARY CRASH CUSHION, REDIRECTIVE OPTION	LO	60.000
	0102 99	PORTABLE CHANGEABLE MESSAGE SIGN, TEMPORARY	ED	808.000
	0102911 1	PAVEMENT MARKING REMOVABLE TAPE, WHITE OR BLACK, SKIP	LF	9,530.000
	0102911 2	PAVEMENT MARKING REMOVABLE TAPE, WHITE OR BLACK,SOLID	LF	29,791.000
	0102912 2	PAVEMENT MARKING REMOVABLE TAPE, YELLOW, SOLID	LF	15,186.000
	0104 11	FLOATING TURBIDITY BARRIER	LF	1,200.000
	0327 70 1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	300.000
	0337 7 82	ASPHALT CONCRETE FRICTION COURSE,TRAFFIC C, FC-9.5, PG 76-22	TN	16.500
	0710 11101	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID, 6"	GM	1.670
	0710 11102	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SOLID FOR INTERCHANGE AND URBAN ISLAND, 8"	GM	0.200
	0710 11131	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, SKIP, 10-30 OR 3-9 SKIP, 6" WIDE	GM	3.160
	0710 11160	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, MESSAGE OR SYMBOL	EA	4.000
	0710 11170	PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, ARROWS	EA	4.000
	0710 11201	PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, SOLID, 6"	GM	1.640

Section 0003 Signing

Alt	Item ID	Item Description	Unit	Quantity
	0706 3	RETRO-REFLECTIVE PAVEMENT MARKERS	EA	250.000
	0710 90	PAINTED PAVEMENT MARKINGS, FINAL SURFACE 43652215201	LS	1.000
	0711 11124	THERMOPLASTIC, STANDARD, WHITE, SOLID, 18" FOR DIAGONALS AND CHEVRONS	LF	35.000
	0711 14560	THERMOPLASTIC, PREFORMED, WHITE WITH BLACK CONTRAST ON CONCRETE PAVEMENT, MESSAGE OR SYMBOL	EA	5.000
	0711 14570	THERMOPLASTIC, PREFORMED, WHITE WITH BLACK	EA	5.000

UNIT () - Indicates bid as lump sum



Florida Department of Transportation

03/02/2018

Approximate Quantities

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Proposal ID: E6K72

Call Order: 003

Letting: 06180125

Letting Date: 01/25/2018

Alt	Item ID	Item Description	Unit	Quantity
		CONTRAST, ARROW ON CONCRETE SURFACE		
	0713103101	PERMANENT TAPE, WHITE, SOLID, 6" FOR CONCRETE BRIDGES	GM	0.835
	0713103102	PERMANENT TAPE, WHITE, SOLID, 8" EXIT LANE AT INTERCHANGE ON CONCRETE PAVEMENT	GM	0.100
	0713103131	PERMANENT TAPE, WHITE, SKIP/DOTTED, 6" FOR CONCRETE SURFACES	GM	1.579
	0713103201	PERMANENT TAPE, YELLOW, SOLID, 6" FOR CONCRETE BRIDGES	GM	0.819
	0713103331	PERMANENT TAPE, BLACK, SKIP/DOTTED, 6" FOR CONCRETE SURFACES	GM	1.579

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UNIT () - Indicates bid as lump sum



Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

MICHAEL J. DEW
SECRETARY

ADDENDUM NO. 1

DATE: January 8, 2018

TO: PROPOSERS

FROM: District Six - Procurement Office-Martha Hevia

RE: **Project/ Proposal No.: E-6K72**
Financial Project No.: 436522-1-52-01
County(ies): Miami-Dade
Project Name: Bridge Repair and Rehabilitation – McArthur Cswy

Proposers and other interested parties are informed that the above referenced Project information is hereby supplemented as set forth below:

1. B1 Existing Plans were added to this contract

All other documents of the subject project remain unchanged.

Failure to file a protest within the time prescribed in section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under chapter 120, Florida Statutes.



Florida Department of Transportation

RICK SCOTT
GOVERNOR

1000 Northwest 111th Avenue
Miami, FL 33172

MICHAEL J. DEW
SECRETARY

ADDENDUM NO. 2

DATE: January 18, 2018

TO: PROPOSERS

FROM: District Six - Procurement Office-Martha Hevia

RE: **Project/ Proposal No.: E-6K72**
Financial Project No.: 436522-1-52-01
County(ies): Miami-Dade
Project Name: Bridge Repair and Rehabilitation – McArthur Cswy

Proposers and other interested parties are informed that the above referenced Project information is hereby supplemented as set forth below:

PLANS REVISION NUMBER 1

<u>Sheet No(s).</u>	<u>Rev. Date</u>	<u>Description</u>
B-1	1/16/2018	Listed Revisions
B-2	1/16/2018	Added Sheet B-3A number
B-3A	1/16/2018	Added Signature Sheet
B-4	1/16/2018	See Summary of Quantities Tables Below
BQ-3	1/16/2018	Summary of Structures Quantities table revised
BQ-4	1/16/2018	Summary of Structures Quantities table revised
B-7	1/16/2018	Deleted Concrete Finish
B1-13	1/16/2018	Added Note 3
B1-86	1/16/2018	Deleted Note
B1-87	1/16/2018	Replaced Truck Mounted Attenuator with temporary Crash Cushion

SUMMARY OF QUANTITIES – New Pay Items

Pay Item	Sheet No.	Add. /Del./Rev.	Old Quantity	New Quantity
400-7	B-4	Add	N/A	18250 SY
102-89-1	B-4	Add	N/A	60 EA

All other documents of the subject project remain unchanged.

Failure to file a protest within the time prescribed in section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under chapter 120, Florida Statutes.

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Bid Questions and Answers Report

Date & Time:

3/2/2018 5:01:17 PM

District Address: District 6 Construction Office, located at 1000 NW 111 Ave, Miami, FL 33172

District Phone: (305) 640-7448

Proposal: E6K72

Project: 436522-1-52-01

Letting Date: 1/25/2018

Location: DISTRICT OFFICE

Description: SR A1A/MACARTHUR CSWY

Question: 20588: Please detail the location for bid item 0460-1-2 Stuct Steel, Rehab, Low Alloy - 384 LBs. Posted: 12/20/2017 9:50:34 AM

Answer: Refer to Sheet B1-5 Repair Type V - Section E-E, quantity is for the replacement of the existing bolts. Status: ANSWER PUBLISHED

Posted: 12/21/2017 5:01:38 PM

Question: 20613: Where can I download the As-Is plans?? Posted: 12/21/2017 4:53:41 PM

Answer: Excerpts from existing plans were incorporated in the Contract Plan Documents. We do not have records of as-built plans. Status: ANSWER PUBLISHED

Posted: 1/4/2018 3:13:57 PM

Question: 20617: Please provide the details (dimensions, type, ...) for the existing beams, or provide the existing as-built drawings. Posted: 12/26/2017 9:47:47 AM

Answer: See response to question 20613. Status: ANSWER PUBLISHED

Posted: 1/4/2018 3:16:43 PM

Question: 20624: Please provide further information regarding the procured laminate shown on sheet B1-56 section A-A. We can find no mention of it in the TSPs. Posted: 12/28/2017 3:56:13 PM

Answer: Dimensions are defined on sheets B1-56 to B1-65. Material properties are defined on sheet B-09. Status: ANSWER PUBLISHED

Posted: 1/4/2018 3:19:17 PM

Question: 20625: Please clarify note #2 under Concrete Repair Notes on Sheet B5, that states that work will be limited to only one beam, footing, strut or column per pier at a time. There are numerous beams in a span that need repair - are we limited to working on one at a time in that span? If so, does this apply to all work on the beam including the carbon fiber?

Posted: 12/28/2017 4:06:16 PM

Answer: In Note 4 of Sheet B-5 we are limiting the work to one beam per Pier at a time. This note was included to maintain safety during the repair in places where the existing beams have broken strands and reduced capacity.

Status: ANSWER PUBLISHED

Posted: 1/4/2018 3:20:57 PM

Question: 20648: Are there As-Built plans available for this project?

Posted: 1/3/2018 8:38:56 AM

Answer: See response to question 20613.

Status: ANSWER PUBLISHED

Posted: 1/4/2018 3:15:43 PM

Question: 20659: The width of the CFRP shown on the elevation on sheet B1-56 is not an industry standard (23.39" & 8.80"). Could you provide the design loads used for design of these strips in order for us to redesign the system using a width and spacing that works with our material?

Posted: 1/4/2018 9:45:55 AM

Answer: Design has been carried out in accordance to the FDOT Structural Manual Vol 4 (Fiber Reinforced Polymer Guidelines). Dimensions shown in the drawings could be adjusted as long as they meet FDOT's specifications and provide the same structural capacity of the FRP system defined in the drawings.

Status: ANSWER PUBLISHED

Posted: 1/4/2018 3:22:49 PM

Question: 20660: There is a detail that shows bi-directional carbon wrap but the specifications do not provide the minimum material properties for this. Please provide.

Posted: 1/4/2018 9:47:28 AM

Answer: Refer to sheet B-09.

Status: ANSWER PUBLISHED

Posted: 1/4/2018 3:23:47 PM

Question: 20661: Please provide the minimum properties for both bi-directional fabric and the pre-cured laminates.

Posted: 1/4/2018 9:48:11 AM

Answer: Refer to sheet B-09.

Status: ANSWER PUBLISHED

Posted: 1/4/2018 3:24:08 PM

Question: 20686: Refer to Sheet B-7 "Painting Notes"; A clear coat is mentioned in the section. The standard specification for Class 5 do not include a clear coat. Is the intent to provide a clear coat over Class 5 finish? If so please provide additional information and product as basis of design for clear coat.

Posted: 1/8/2018 8:33:11 AM

Answer: It is not the intent to provide a clear coat over Class 5 finish.

Status: ANSWER PUBLISHED

Posted: 1/9/2018 12:35:54 PM

Question: 20691: Detail on sheet B-7 indicates Class 5 on outer edge of bent caps. Does item 400-143 also include east, west and bottom sides of caps?

Posted: 1/8/2018 8:39:31 AM

Answer: Plan quantity for pay item 400-143 only includes Class 5 Finish Coating along median, traffic and pedestrian barriers. Class 5 Finish Coating not to be applied on the exterior beams and pier caps as indicated on the concrete finish detail on Sheet B-7.

Status: ANSWER PUBLISHED

Posted: 1/11/2018 11:44:22 AM

Question: 20692: Pay-item 561-1; Will painting of existing structural steel conform to specification 561 as an overcoat paint application or removal and replacement paint system?

Posted: 1/8/2018 8:47:35 AM

Answer: The intent is to remove the coatings from existing structural steel in accordance with the requirements of Article 561-6.6 of the Special Provisions (Article 560-7.6 of the Standard Specifications) and replace with the coating system defined in Section 561-8.

Status: ANSWER PUBLISHED

Posted: 1/9/2018 3:19:02 PM

Question: 20697: With regards to the structural steel spans which require Painting . Is this project requiring Overcoat or Full Removal & Re-Coat . Second hand , does the clear coat note appearing on Dwg. B-7 apply to the Exterior Girder Faces or the Entire Structural Steel Framing .

Posted: 1/8/2018 10:00:06 AM

Answer: - See response to question 20692.
- Clear coat is intended for outside surfaces and bottom surface of bottom flange of exterior beams, i.e. surfaces exposed to sunlight.

Status: ANSWER PUBLISHED

Posted: 1/9/2018 3:22:11 PM

Question: 20703: Since the answer to question number 20613 is that there are no records available of as built plans, could we access the under- side of the steel spans over the navigation channel via a site visit?

Posted: 1/8/2018 1:38:22 PM

Answer: Existing bridge plans have been added to the bid documents with Addendum 1. If the Bidders would like to visit the site please contact Pablo Orozco at pablo.orozco@dot.state.fl.us to coordinate a date and time. Prior US Coast Guard notification is required. **Status:** ANSWER PUBLISHED
Posted: 1/9/2018 4:30:08 PM

Question: 20707: Sheet number B1-3, under sacrificial cathodic protection/structural integral pile jacket bold title, refers to note 15, but it is missing note 15 under Jacket Notes. Please advise what note 15 refers to. **Posted:** 1/9/2018 9:04:17 AM

Answer: Sheet number B1-3, under sacrificial cathodic protection/structural integral pile jacket bold title, reference to note 15 is incorrect. The correct reference is to Note 13. **Status:** ANSWER PUBLISHED
Posted: 1/10/2018 1:08:52 PM

Question: 20710: There is not a pay item for bridge deck grooving, is it part of this contract? **Posted:** 1/9/2018 9:35:59 AM

Answer: Yes, deck grooving is part of the contract, Pay Item 400-7 Bridge Deck Grooving for deck thickness less than 8.5" in SY will be added to the contract documents. **Status:** ANSWER PUBLISHED
Posted: 1/11/2018 11:45:32 AM

Question: 20715: Bid Item 0561-1 Coating Existing Steel bid quantity is 1 Lump Sum. Sheet BQ-4 gives an approximation of 276 tons. On the provided existing plans, drawing 3 of 8 (sheet 30 of 45 of the pdf), states that there are 276 tons of structural steel in the I Beam Spans. Please confirm that this is the structural steel to be painted and not any portion of the 49.5 tons of the shoe assemblies in the prestressed spans. **Posted:** 1/10/2018 7:49:35 AM

Answer: Shoe assemblies at the prestressed spans are not to be painted. **Status:** ANSWER PUBLISHED
Posted: 1/10/2018 1:09:56 PM

Question: 20716: Is there any lead in the paint removal? **Posted:** 1/10/2018 7:52:58 AM

Answer: Lead, Cadmium and Chromium were not detected in samples collected from the bridge during the coatings condition assessment. **Status:** ANSWER PUBLISHED
Posted: 1/10/2018 1:18:21 PM

Question: 20727: Please refer to sheet B1-10, note 5, regarding the full depth deck replacement, is the Contractor required to preserve and reuse all the transverse reinforcement from both the top and bottom mat? **Posted:** 1/10/2018 4:15:40 PM

Answer: At the joints between existing and new concrete, all the existing steel across the interface is to be preserved, cleaned and straightened for a minimum distance of 2'-0". The remaining existing reinforcing steel is to be removed and replaced with the new reinforcing as shown on the plans.

Status: ANSWER PUBLISHED

Posted: 1/11/2018 11:47:36 AM

Question: 20728: Please refer to sheet B1-10, note 5, regarding the full depth deck replacement, is the Contractor required to replace all longitudinal reinforcement from both the top and bottom mat?

Posted: 1/10/2018 4:16:13 PM

Answer: See response to question 20727.

Status: ANSWER PUBLISHED

Posted: 1/11/2018 11:50:57 AM

Question: 20729: Is there a noise ordinance that will limit working 24 hours shifts starting at 9:00AM on Monday to 3:00PM on Friday?

Posted: 1/10/2018 4:16:59 PM

Answer: All work that generate excessive level of noise and disturb residents shall be performed during daytime.

Status: ANSWER PUBLISHED

Posted: 1/11/2018 1:01:16 PM

Question: 20730: Are there any restrictions that will limit working 24 hours shifts starting at 9:00AM on Monday to 3:00PM on Friday?

Posted: 1/10/2018 4:18:24 PM

Answer: See response to question 20729.

Status: ANSWER PUBLISHED

Posted: 1/11/2018 1:04:25 PM

Question: 20731: Please refer to sheet B1-13, note 1. How is it determined that the existing concrete surface is saturated? Is the point of saturation determined by a visual verification or is there a QC test required?

Posted: 1/10/2018 4:20:00 PM

Answer: The point of saturation shall be determined by visual inspection.

Status: ANSWER PUBLISHED

Posted: 1/11/2018 12:44:58 PM

Question: 20732: Please refer to TSP for hydrodemolition, T2 on page 91. Posted: 1/10/2018 4:22:17 PM

"An area where full depth removal and subsequent patching will be done as part of this work. For the work of this section a localized area shall not exceed 25ft²."

Does this note limit the Contractor to only remove 25SF per week within each full depth section?

Answer: Hydrodemolition Technical Special Provisions are for partial deck removal only (see T1 of the TSP). Localized area is the area of full depth removal within partial depth removal area. The Contractor should avoid full depth removal within partial removal area. However, if full depth is removed, this localized area shall not exceed 25 SF or 5% of partial area removed during the operation, whichever is less. Status: ANSWER PUBLISHED
Posted: 1/16/2018 12:50:10 PM

Question: 20733: Will bridge deck planning be required? Posted: 1/10/2018 4:22:46 PM

Answer: Bridge deck planning is not required. Status: ANSWER PUBLISHED
Posted: 1/11/2018 1:34:25 PM

Question: 20734: Is the bridge deck grooving required to be completed before the every Friday at 3:00PM? Posted: 1/10/2018 4:24:33 PM

Answer: At a minimum grooving shall be done as soon as a full lane rehabilitation is completed or once in three months, whichever comes first. Status: ANSWER PUBLISHED
Posted: 1/16/2018 4:00:37 PM

Question: 20735: What is the minimum compressive strength of concrete required to begin bridge deck grooving? Posted: 1/10/2018 4:27:28 PM

Answer: The minimum compressive strength of concrete required to begin bridge deck grooving is 3,500 psi. Status: ANSWER PUBLISHED
Posted: 1/11/2018 1:41:44 PM

Question: 20736: The proposed deck design is rated HL-93. What is the current rating for the existing bridge? Posted: 1/10/2018 4:27:52 PM

Answer: For the current rating for existing bridge see the Bridge Load Rating form attached. Status: ANSWER PUBLISHED

Posted: 1/16/2018 4:04:42 PM

Document: 6861893: E6K72 - McArthur East Bridge - RatingExtractPage1 (002).pdf

Bridge Load Rating form.

Question: 20737: What is the current weight limit of the bridge? Posted: 1/10/2018 4:28:23 PM

Answer: See response to question 20736. Status: ANSWER PUBLISHED

Posted: 1/16/2018 4:07:58 PM

Question: 20738: Can you provide the existing plans for the deck reinforcement? That will be required for two reasons. One, to assist quantifying the volume of hydrodemolition. Two and more importantly, it is needed to determine loads of construction equipment, such as a 60,000 lb milling machine supported by 4 narrow tracks removing 2" of a compromised structure and into a truck, all on the same span. Posted: 1/10/2018 4:29:48 PM

Answer: The existing plans with deck reinforcement were provided in Addendum 1. Status: ANSWER PUBLISHED

Posted: 1/16/2018 4:08:42 PM

Question: 20739: Please refer to bid item 0400-4-4 Concrete Class IV, Superstructure. I am calculating an underrun of roughly 300 CY. Can you please provide a quantity breakdown for each type of replacement, the full depth and partial depth removals? Posted: 1/10/2018 4:31:05 PM

Answer: Your calculation is correct, the quantity for the partial deck removal was calculated for an average depth of 3.5" (instead of 3"). We considered an additional removal during the hydrodemolition, and the difference is about 300 CY. Status: ANSWER PUBLISHED

Posted: 1/11/2018 2:00:03 PM

Question: 20741: Please refer to bid item 0400-4-4 Concrete Class IV, Superstructure. The bid item quantity is 1884 CY. I am calculating the quantity for the full depth replacement to roughly 50 CY and at a 3" depth the partial depth replacement quantity is roughly 1500 CY, for an approximate total takeoff quantity of 1550 CY. Is there a quantity contingency built in the bid item for the partial demo areas? Is the quantity for the partial removal calculated at a depth greater than 3"? Posted: 1/10/2018 5:02:58 PM

Answer: See response to question 20739.

Status: ANSWER PUBLISHED

Posted: 1/11/2018 2:01:50 PM

Question: 20750: With regards to Dwg. # B1-56 . Please provide a Width dimension of the required Unidirectional Longitudinal Precured Laminate as shown on Section A-A so that we may come up with a accurate Quantity of Material required for this Scope of work . Thank you

Posted: 1/12/2018 9:44:22 AM

Answer: Refer to elevation view of Section A-A on Sheet B1-56: 3.94"x0.047".

Status: ANSWER PUBLISHED

Posted: 1/16/2018 4:09:23 PM

Question: 20751: Can contractor use steel barrier wall on bridge in place of K Wall?

Posted: 1/12/2018 9:59:33 AM

Answer: The Contractor shall use type K temporary concrete barrier wall only.

Status: ANSWER PUBLISHED

Posted: 1/16/2018 4:09:59 PM

Question: 20758: Can you provide a quantity breakdown for bid item 401 70 2 Restore Spalled Areas. Assuming this bid item is composed of spall repairs for the pile bents, pile caps, pier caps, strut repairs, column repairs, barrier wall repairs, column repairs, barrier wall, deck top side and deck underside - dimensions for spalls were only given for barrier wall and the decks.

Posted: 1/12/2018 3:43:22 PM

Answer: Here is the quantity breakdown for Bid Item 401 70 2:

Status: ANSWER PUBLISHED

- 1) Footers - 97 CF;
 - 2) Columns - 112 CF;
 - 3) Struts - 284 CF;
 - 4) Pier Caps - 58 CF;
 - 5) Bent Caps - 190 CF;
 - 6) Superstructure - 2226 CF;
- Total 2967 CF.

Posted: 1/16/2018 4:28:08 PM

Question: 20761: Is there any time period restriction to close one bound at the time for the bridge pedestrian path?

Posted: 1/12/2018 4:33:59 PM

Answer: The Contractor may detour pedestrian traffic per Index 660 to one side of the bridge during night time only (9 pm to 6 am).

Status: ANSWER PUBLISHED

Posted: 1/16/2018 4:13:01 PM

Question: 20764: Normally, the qualification requirements for a CP Specialist on FDOT bridge rehabilitation projects include an alternative of a cathodic protection practitioner with a minimum of 12 years (some specs require 10 years) of experience in the field of cathodic protection of concrete structures in marine environments. Will this be acceptable for this project?

Posted: 1/12/2018 8:18:22 PM

Answer: The required experience for a Cathodic Protection Specialist is specified in Article T3 of the Technical Special Provisions for Cathodic Protection.

Status: ANSWER PUBLISHED

Posted: 1/16/2018 4:25:12 PM

Question: 20789: Is the Contractor allowed to use Stay-In-Place (SIP) forms on this project in the full depth replacement areas?

Posted: 1/15/2018 5:00:21 PM

Answer: Stay in place (SIP) forms on this project in the full depth replacement areas is not allowed.

Status: ANSWER PUBLISHED

Posted: 1/16/2018 4:25:45 PM

Question: 20800: Concrete Repair Note 3 on sheet B-5 says a spall survey of the bridge elements is to be performed to identify the size and location of cracks, spalls and delaminations prior to any rehabilitation work. Is this survey required to verify the deficiency schedules provided in plans?

Posted: 1/16/2018 12:50:04 PM

Answer: The survey is required to verify the deficiency schedules provided in the plans and to verify new locations of cracks, spalls and delamination that developed after the design inspections.

Status: ANSWER PUBLISHED

Posted: 1/18/2018 10:48:59 AM

Question: 20809: 1) The Summary of Structure Quantities - Bridge 870077 Table on Plan Sheet BQ-4 indicates that all plan quantity of bid item 0401 7 2 (Restore Spalled Areas, Latex Modified Mortar - Styrene Butadiene) 2967 CF is intended for the substructure of the bridge. Plan sheets B1-16 through B1-48 lists multiple spalls that are a part of the superstructure of the bridge and reference the Spall Repair TSP as a repair. What are all the elements of the bridge that the department intends to utilize bid item 0401 7 2 for?

Posted: 1/17/2018 7:16:18 AM

Answer: The plan sheet BQ-4 indicates that all quantities of Bid Item 401-72-2 (2967 CF) are in the Substructure section; however, the total quantity is for substructure and superstructure. The breakdown of the quantity was provided in the response to question 20758.

Status: ANSWER PUBLISHED

Posted: 1/18/2018 11:14:29 AM

Question: 20810: 2) Plan sheets B1-72 through B1-85 details MOT lane shift patterns that facilitate access specific to the FULL deck replacement on plan sheet B1-10 and B1-11. Will the department require the use of temporary barrier wall to be installed during the hydrodemolition and PARTICAL deck replacement operations?

Posted: 1/17/2018 7:17:24 AM

Answer: Yes, barrier walls will be required during hydrodemolition.

Status: ANSWER PUBLISHED

Posted: 1/18/2018 11:15:52 AM

Question: 20811: 3) Plan Sheet B1-71 note 4 references a closure time from Monday at 9:00 am to Friday at 3.30 pm specifically for bridge deck replacement or hydrodemolition. Plan sheet B1-86 bottom right note states "Type I,II,DI,VP, DRIM, OR LCD CHANNELIZING DEVICES MAY BE USED IN LIEU OF TEMPORARY CONCRETE BARRIER WALL, BUT ONLY FOR BRIDGE DECK GROOVING AND EXPANSION JOINT OPERATIONS." Does the Department require the temporary barrier wall and crash cushions to be installed and removed weekly as a part of the deck replacement or hydrodemolition operations?

Posted: 1/17/2018 7:19:26 AM

Answer: See response to question 20810.

Status: ANSWER PUBLISHED

Posted: 1/18/2018 11:16:54 AM

Question: 20814: Sheet BQ-3 shows a quantity of 6 ea temporary crash cushions. If temporary barrier is required for hydrodemolition activities, then this quantity is insufficient. Please advise if this quantity will be increased.

Posted: 1/17/2018 9:43:00 AM

Answer: Traffic Control Details on sheet B1-87 will be revised and truck mounted attenuators will be replaced with Temporary Crash Cushions (Pay Item 102-89-1). The pay item quantities will be increased.

Status: ANSWER PUBLISHED

Posted: 1/18/2018 11:23:21 AM

Question: 20815: On Sheet B-6, Item 110-12-1 states risk and cost associated with accidental removal of concrete in excess of 3 inches is the contractors responsibility. If there is a deck blow out due to unforeseen insufficient strength concrete, will the contractor be responsible for the cost of repairing the blow out?

Posted: 1/17/2018 9:43:59 AM

Answer: In case of accidental removal of concrete in excess of 3 inches, the Contractor shall stop the operation immediately until the deck blow out is reviewed by the Engineer. The Contractor will be compensated for the cost of repairing the blow out due to unforeseen insufficient strength concrete, if approved by the Engineer.

Status: ANSWER PUBLISHED

Posted: 1/18/2018 3:17:27 PM

Question: 20831: Due to high daytime temperatures in South Florida, can concrete placement for the bridge deck be done at night? Posted: 1/17/2018 3:40:13 PM

Answer: See response to question 20729. Status: ANSWER PUBLISHED

Posted: 1/17/2018 4:22:20 PM

Question: 20832: Please specify the bonding agent, if any, required for the partial deck replacement. Posted: 1/17/2018 4:46:50 PM

Answer: The bonding agent is not required for the partial deck replacement. Status: ANSWER PUBLISHED

Posted: 1/18/2018 11:25:54 AM

Question: 20859: Please clarify what pay items are included on 710 90 Final Surface. Posted: 1/18/2018 3:31:36 PM

Answer: Pay Item 710-90 includes painted pavement markings (Final Surface) per Article 710-4.1.1 of the Standard Specifications. Status: ANSWER PUBLISHED

Posted: 1/19/2018 10:01:26 AM

Question: 20860: Section T2 in the TSPs for Spall Repair state that six cube samples must be taken for each field batch (defined as each load of a concrete mixer). This will lead to excessive testing requirements. Will the owner relax this requirement to require daily testing only? Posted: 1/18/2018 4:13:42 PM

Answer: Sampling schedule for field batching may be reduced to six cube samples testing daily for each concrete mix, as approved by the Engineer. Status: ANSWER PUBLISHED

Posted: 1/18/2018 5:30:14 PM

Question: 20864: Has the Department identified any potential storage/laydown area that the contractor will be allowed to use? Posted: 1/19/2018 9:06:44 AM

Answer: The Department has not identified any storage/laydown areas for the Contractor. Status: ANSWER PUBLISHED

Posted: 1/19/2018 4:57:23 PM

Question: 20865: Has the Department made any agreements (for usage) of any boat ramp near the McArthur Bridge? Posted: 1/19/2018 9:10:00 AM

Answer: The Department has not made any agreements for usage of boat ramps. **Status:** ANSWER PUBLISHED

Posted: 1/19/2018 4:58:01 PM

Question: 20866: Currently the closest public boat ramp to the jobsite is the Pelican Harbour Boat Ramp which is located on NE 79th St (5.5 miles away from jobsite) and open from 7:00 AM to 7:00PM. Does the Department have an agreement already for the contractor to be able to use this ramp outside the hours open to the public and also to keep construction equipment at that location to be able to load the construction materials onto the boats? **Posted:** 1/19/2018 9:10:45 AM

Answer: See response to question 20865. **Status:** ANSWER PUBLISHED

Posted: 1/19/2018 4:58:35 PM

Question: 20867: Could the Department please provide the Turbidity Monitoring and Management Plan referenced on plan sheet B-08. **Posted:** 1/19/2018 9:11:11 AM

Answer: The Contractor shall prevent any materials from falling in the water. The Contractor shall submit to the Engineer a Containment Work Plan (CWP) per Note 4 on Sheet B-05 and Article 104-6.4.11 of the Special Provisions. The Contractor shall be responsible to prepare the Turbidity Monitoring and Management Plan to comply with turbidity requirements and obtain approval from the Engineer. **Status:** ANSWER PUBLISHED

Posted: 1/19/2018 5:36:50 PM

Question: 20868: For typical minor spall repairs on beam a typical construction method is to attached a piece of plywood directly underneath the beam in order to hold the grout until it cures. If proceeded with this method, would signed and sealed shop drawings would be required for this method as noted on page B-08? **Posted:** 1/19/2018 9:11:36 AM

Answer: Shop drawings for formwork will not be required for small spalls where material can be placed by hand and troweled. **Status:** ANSWER PUBLISHED

Posted: 1/19/2018 5:01:55 PM

Question: 20869: Will shop drawings for repair be required for every repair location or will a typical repair shop drawing suffice the requirement of note # 4 of page B-08? **Posted:** 1/19/2018 9:12:03 AM

Answer: Formwork for locations similar in shape and size may be combined in one shop drawing submittal. **Status:** ANSWER PUBLISHED

Posted: 1/19/2018 5:36:58 PM

Question: 20870: The plans specify on page B1-12, note 4, If the cross section of the Bar is less than 75% of the original cross section, the contractor shall remove and replace these bars as directed by the Engineer. Will the Department grant additional time and compensation for all related costs associated?

Posted: 1/19/2018 9:12:29 AM

Answer: The Contractor shall anticipate that during partial hydrodemolition 5% of reinforcing bars will require replacement per Note 4 on Sheet B1-12. Per Article T8 of the Technical Special Provisions for Hydrodemolition the cost shall be included in Pay Item 110-12-1 (Hydrodemolition). The Department will not grant additional time or compensation unless more than 5% of reinforcement will require replacement.

Status: ANSWER PUBLISHED

Posted: 1/19/2018 5:37:06 PM

Question: 20871: Could the Department please clarify which of the Bridge attached utility line are currently in service and which aren't?

Posted: 1/19/2018 9:13:15 AM

Answer: All utilities attached to the bridge are in service.

Status: ANSWER PUBLISHED

Posted: 1/19/2018 3:05:42 PM

Question: 20872: Sheet B1-56 - Is it the FDOT intent to close lanes (no traffic) over the beam while CFRP repairs are taking place, as well as one beam at the time for any given span for CFRP. Please confirm as this may impact significantly the project schedule.

Posted: 1/19/2018 1:25:12 PM

Answer: The requirement to close traffic over the beams during CFRP repair and the contract duration shall remain.

Status: ANSWER PUBLISHED

Posted: 1/19/2018 5:31:52 PM

Question: 20873: Sheet B1- 86 TTCP Notes say that cost of channelizing devices and temporary pavement markings is included in the pay item 102-1, MOT. Please confirm that the Pay items 102 911 1, 2 & 102 12 2 are indeed not a part of the TTCP Pay Item 102-1

Posted: 1/19/2018 1:27:03 PM

Answer: Pay items 102-911-1, 2 & 102-912-2 are not a part of the TTCP Pay Item 102-1. Cost of temporary pavement markings will be included in the related pay items.

Status: ANSWER PUBLISHED

Posted: 1/19/2018 5:34:12 PM

Question: 20874: Sheet B1-55 the Repair notes, note 9 refers to the formwork being able to withstand 14 psi of pressure. Will it be acceptable to have a 3 psi design for these forms?

Posted: 1/19/2018 1:27:49 PM

Answer: The Contractor shall design the formwork to meet the Standards (ACI, OSHA, etc.). **Status:** ANSWER PUBLISHED

Posted: 1/19/2018 5:35:21 PM

Question: 20879: Can the Department please provide existing compressive strength data of the concrete to be hydrodemolished? ICRI Guideline 310.3R-2014 states the speed of removal is inversely related to the concrete's compressive strength and cost is directly related to compressive strength. Providing compressive strength data will minimize potential disputes once the work starts. Thank you. **Posted:** 1/22/2018 8:38:50 AM

Answer: The existing bridge plans show that Class A concrete with 3.0 ksi compressive strength was used for the deck. During bridge rehabilitation work Class II concrete with strength of 3.4 ksi was used. **Status:** ANSWER PUBLISHED

Posted: 1/22/2018 2:50:09 PM

Question: 20881: Sheet B1-56 note #4 states "No traffic is allowed over the beams while being repaired". This note is on a page that predominantly contemplates the CFRP repair but there are other notes on that page that discuss beam section restoration which would include the strand repair and the repair of the spalled area. Is it the intention of note #4 to limit vehicular traffic only during the carbon fiber wrapping? Does that mean that no lane closures above are necessary when the beams are demoed and the strands are being repaired? If lane closures are required during the demo and the strand repairs then will the lane closures have to be maintained from start of demo until CFRP? Currently the MOT provided in the drawings doesn't allow lane closures that will allow for that long of a duration. **Posted:** 1/22/2018 11:03:48 AM

Answer: The design intention is to close traffic over the beams during demolition, strand splice repair, restoration and installation of CFRP laminates. Therefore, no traffic is allowed from the time demolition starts until the full beam section is restored. The lane closures can be lifted during the interim time between completion of beam restoration and the start of CFRP installation. No traffic is allowed over the beams during the installation of the CFRP laminates. Traffic will be allowed after CFRP installation and the epoxy has cured for 2 to 8 hours depending on temperature and atmospheric conditions. **Status:** ANSWER PUBLISHED

Posted: 1/22/2018 3:52:47 PM

Answer: Lanes above beams shall be closed to traffic during beam section restoration work including demolition and strand repairs. The lane closures have to be maintained until concrete used for repair reach minimum 5,500 psi. **Status:** ANSWER VOIDED

Posted: 1/22/2018 3:15:51 PM

Question: 20882: Hydro demolition production rates are directly tied to the compressive strength of the concrete being removed. In past projects the FDOT has provided data of the existing concrete strength for the purposes of estimating the hydro demolition. Since this project has a short time window for the removal of the concrete deck to opening up to traffic, this data is ultra-critical for proper estimating. Please provide if this data exists and if not what should the contractors bidding anticipate? **Posted:** 1/22/2018 12:35:05 PM

Answer: See response to question 20879.

Status: ANSWER PUBLISHED

Posted: 1/22/2018 2:51:03 PM

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November 22, 2017

PREPARED BY: Manuel Solaun, PE/Victor Rosas, PE/Mohit Soni, PE



SPECIFICATIONS PACKAGE

Contract Number: E6K72

FINANCIAL PROJECT ID(S).436522-1-52-01

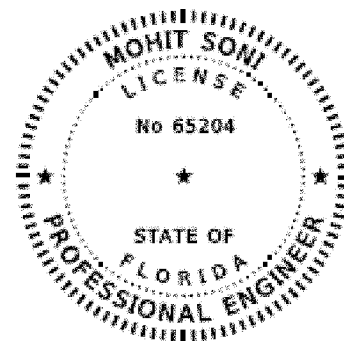
DISTRICT SIX
MIAMI-DADE COUNTY

The January 2018 Edition of the Florida Department of Transportation Standard Specifications is revised as follows:

I hereby certify that this specifications package has been properly prepared by me, or under my responsible charge, in accordance with procedures adopted by the Florida Department of Transportation.

The official record of this package has been electronically signed and sealed using a Digital Signature as required by 61G15-23.004 F.A.C. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Prepared By: Mohit Soni, PE
Date: 11/22/2017
Fla. License No.: 65204
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Firm Address: 2056 Vista Parkway, Suite 100
City, State, Zipcode: West Palm Beach, FL 33411
Certificate of Authorization: 27013
Pages: 1-95



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PROPOSAL REQUIREMENTS AND CONDITIONS - EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND SITE OF WORK.
(REV 11-3-15) (FA 1-27-16) (1-18)

ARTICLE 2-4 is deleted and the following substituted:

2-4 Examination of Plans, Specifications, Special Provisions, and Site of Work.

Examine the Contract Documents and the site of the proposed work carefully before submitting a Proposal for the work contemplated. Investigate the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished and as to the requirements of all Contract Documents.

Direct all questions to the Department by posting them to the Department's website at the following URL address:

<https://fdotwp1.dot.state.fl.us/BidQuestionsAndAnswers/Proposal.aspx/SearchProposal>. Questions posted to this site before 5:00 P.M. (EST) on the seventh calendar day prior to the bid opening, or tenth calendar day prior to the December bid opening, will be responded to by the Department. For questions posted after these times, an answer cannot be assured. For all questions posted before the deadline, the Department will provide and post responses at the same website before 8:00 A.M. (EST) on the second calendar day prior to bid opening. Take responsibility to review and be familiar with all questions and responses posted to this website and to make any necessary adjustments in the proposal accordingly. If the Department's web site cannot be accessed, contact the Procurement Office at (305) 470-5457.

When, in the sole judgment of the Department, responses to questions require Plan revisions, Specification revisions and/or addenda, the Contracts Office will issue them as necessary.

Examine the Contract Documents and the site of the proposed work carefully before submitting a Proposal for the work contemplated. Investigate the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished and as to the requirements of all Contract Documents.

The Department does not guarantee the details pertaining to borings, as shown in the Plans, to be more than a general indication of the materials likely to be found adjacent to holes bored at the site of the work, approximately at the locations indicated. The Bidder shall examine boring data, where available, and make their own interpretation of the subsoil investigations and other preliminary data, and shall base their bid solely on their own opinion of the conditions likely to be encountered.

The Bidder's submission of a Proposal is prima facie evidence that the Bidder has made an examination as described in this Article.

AWARD AND EXECUTION OF CONTRACT – PUBLIC RECORDS.
(REV 10-17-16) (FA 10-24-16) (1-18)

ARTICLE 3-9 is expanded by the following:

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:

District 6

305-470-5435
D6precustodian@dot.state.fl.us
Florida Department of Transportation
District 6 – Office of General Counsel
1000 NW 111 Avenue
Miami, FL 33172-5800

SCOPE OF WORK – INTENT OF CONTRACT.

(REV 8-19-09) (FA 8-24-09) (1-18)

ARTICLE 4-1 is expanded by the following:

The Improvements under this Contract consist of Bridge Repair/Rehabilitation along SR A1A/ Macarthur Causeway East Bridge # 870077 in Miami-Dade County.

The summary of pay items for this project is listed in the Plans.

CONTROL OF THE WORK – GENERAL INSPECTION REQUIREMENTS – COOPERATION BY THE CONTRACTOR.

(REV 2-10-94) (1-18)

SUBARTICLE 5-9.1 is expanded by the following:

Provide and maintain throughout the life of the Contract, two utility boats meeting or exceeding the following minimum requirements:

	Utility Boat
(A) Size	
(a) Length	19 feet
(b) Width (Beam)	7 feet
(c) Load Capacity	2,400 pounds
(d) Cabin	
(1) Length	None
(2) Width	None
(3) Height	None
(B) Construction	
(a) Bottom Plating	3/16 inch
(b) Side and Cabin Plating	1/8 inch
(c) Deck and Cockpit Tread Plating	1/8 inch
(d) Plating Material	Marine Aluminum
(e) Seams and Joints	Welded
(C) Drive Power	
(a) Outboard	two each, 75 HP, total 150 HP
(b) Inboard-Outboard	None

(c) Fuel Tank	Required
(D) Equipment	
(a) Mechanical Steering Control	
Speed Control and Light	
Control - Systems-Located	
Forward	Required
(b) Electric Start Mechanism	
Located Forward	Required
(c) Anchor and 300 foot Rope	20 pound
(d) Navigation Lights	Required
(e) Width of Shear Line	
Rubber Bumper	3 inches
(f) Heavy Duty Seating	
Accommodations	two each

Furnish fuel and docking facilities for these boats. The docking facilities' location and adequacy are subject to the approval of the Engineer.

The Engineer and their staff will be permitted to travel on any or all floating equipment and boats used in the work performed.

Include the costs of furnishing and maintaining the boats, including fuel and docking facilities, in the Contract unit prices for other items of the Contract.

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – LAWS TO BE OBSERVED - COMPLIANCE WITH FEDERAL ENDANGERED SPECIES ACT AND OTHER WILDLIFE REGULATIONS (MANATEE).

(REV 6-15-17) (FA 6-20-17) (1-18)

SUBARTICLE 7-1.4 is expanded by the following new Subarticle:

7-1.4.1 Additional Requirements for Manatees (*Trichechus manatus*): The Department has determined that the project occurs within the known habitat of manatees.

The Department will provide instruction at a preconstruction meeting regarding:

1. The presence of the species and manatee speed zones.
2. The appearance, habits and biology of the species.
3. Their protected status.
4. The need to avoid collisions with and injury to the species.
5. The need to avoid any actions that would jeopardize the existence of

these species.

6. The civil and criminal penalties for harming, harassing, or killing these

species.

Advise all work crews of this information.

Operate all vessels at "Idle Speed/No Wake" at all times while in the construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. Follow routes of deep water whenever possible.

Do not dredge river bottom for barge access.

Lower all equipment or material to the mudline in a controlled descent. Do not allow freefall of any equipment or material below the water surface.

Advise all on-site project personnel they are responsible for observing water-related activities for the presence of manatees. Follow the requirements posted in the URL address in Spec 7-1.4 when manatees are observed.

Except for projects in Bay, Escambia, Franklin, Gilchrist, Gulf, Jefferson, Lafayette, Okaloosa, Santa Rosa, Suwannee and Walton:

1. Sediment or turbidity barriers shall be made of material which manatees cannot become entangled, shall be secured, and shall be monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
2. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the Contractor upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads "Caution: Boaters", must be posted in a location conspicuous to boating traffic. A second sign measuring at least 8-1/2 inches by 11 inches, explaining the requirements for "Idle Speed/No Wake" and the shutdown of in-water operations, must be posted in at least one location prominently visible to all onsite project personnel engaged in water-related activities. These signs can be viewed at: www.myfwc.com/wildlifehabitats/managed/manatee/education-for-marinas/sign-vendors

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – LAWS TO BE OBSERVED - COMPLIANCE WITH FEDERAL ENDANGERED SPECIES ACT AND OTHER WILDLIFE REGULATIONS (SAWFISH).

(REV 5-25-17) (FA 6-13-17) (1-18)

SUBARTICLE 7-1.4 is expanded by the following new Subarticle:

- 7-1.4.1 Additional Requirements for Smalltooth Sawfish (*Pristis pectinata*):** The Department has determined that the project occurs within the known habitat of smalltooth sawfish. The Department will provide instruction at a preconstruction meeting regarding:
1. The presence of species and limits of critical habitat.
 2. The appearance, habits and biology of the species.
 3. Their protected status.
 4. The need to avoid collisions with these species.
 5. The need to avoid any actions that would jeopardize the existence of these species.
 6. The civil and criminal penalties for harming, harassing, or killing these species.

Advise all work crews of this information.

Provide sediment and turbidity barriers constructed of material in which a smalltooth sawfish cannot become entangled. Secure and monitor the sediment and turbidity barriers to avoid protected species entrapment. Sediment and turbidity barriers may not block smalltooth sawfish entry to or exit from designated critical habitat without prior approval of the Engineer and concurrence from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.

Operate all vessels at "Idle Speed/No Wake" at all times while in the construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. Follow marked channels or routes of deep water whenever possible.

All on-site project personnel are responsible for observing water-related activities for the presence of smalltooth sawfish. When smalltooth sawfish are observed, follow the smalltooth sawfish guidelines posted in the URL address in 7-1.4.

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – LAWS TO BE OBSERVED - COMPLIANCE WITH FEDERAL ENDANGERED SPECIES ACT AND OTHER WILDLIFE REGULATIONS (SEA TURTLE).

(REV 5-25-17) (FA 6-28-17) (1-18)

SUBARTICLE 7-1.4 is expanded by the following new Subarticle:

7-1.4.1 Additional Requirements for Sea Turtles (*Caretta caretta*, *Chelonia mydas*, *Dermochelys coriacea*, *Lepidochelys kempi*, *Eretmochelys imbricate*):

The Department has determined that the project occurs within the known habitat of sea turtles.

The Department will provide instruction at a pre-construction meeting regarding:

1. The presence of species and limits of critical habitat.
2. The appearance, habits and biology of the species.
3. Their protected status.
4. The need to avoid collisions with these species.
5. The need to avoid any actions that would jeopardize the existence of

these species.

6. The civil and criminal penalties for harming, harassing, or killing these species.

Advise all work crews of this information.

Provide sediment and turbidity barriers constructed of material in which a sea turtle cannot become entangled. Secure and monitor the sediment and turbidity barriers to avoid protected species entrapment. Sediment and turbidity barriers may not block sea turtle entry to or exit from designated critical habitat without prior approval of the Engineer and concurrence from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.

Operate all vessels at "Idle Speed/No Wake" at all times while in the construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. Follow marked channels or routes of deep water whenever possible.

All on-site project personnel are responsible for observing water-related activities for the presence of sea turtles. When sea turtles are observed, follow the sea turtle species guidelines posted in the URL address in 7-1.4.

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – PERMITS AND LICENSES (PERMITS PROCURED BY THE DEPARTMENT).

(REV 11-10-16) (FA 1-26-17) (1-18)

SUBARTICLE 7-2.1 is expanded by the following:

All Permits procured by the Department are posted on the Department's website at the following URL address:

<https://ftp.fdot.gov/public/folder/HkSWIK59G0qRNsAJUh3xXg/permitsandorutilityworkschedules>. Take responsibility to obtain this information and comply with all requirements posted on this website up through five calendar days before the opening of bids.

Comply with the provisions contained in these permits.

If the Department's web site cannot be accessed, contact the Department's Specifications Office Web Coordinator at (850) 414-4101.

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC -PRESERVATION OF EXISTING PROPERTY.

(REV 8-11-16)

SUBARTICLE 7-2 is expanded by the following new Subarticles:

7-2.4 Seagrass Beds: Do not shade any benthic community from direct sunlight for more than two weeks.

7-2.5 Mangroves: Any trimming or disturbance to mangroves shall comply with Sec 403.9321-9333 F.S., "Mangrove Trimming and Preservation Act"; A Professional Mangrove Trimmer, designated per 403.9329 F.S., must be present on site throughout the duration of all mangrove trimming or disturbance activities.

SECTION 7-11.1 is deleted and the following substituted:

7-11.1 General: Preserve from damage all existing property within the project limits of or in any way affected by the Work, the removal or destruction of which is not specified in the Plans. This applies to, but is not limited to, public and private property, public and private utilities (except as modified by the provisions of 7-11.5), trees, shrubs, wetlands, mangroves, seagrass, protected habitat, crops, sod, signs, monuments, fences, guardrail, pipe and underground structures, Intelligent Transportation Systems (ITS) facilities, traffic control signals and devices, highway lighting, and public highways (except natural wear and tear of highway resulting from legitimate use thereof by the Contractor).

Department owned underground facility locations shown in the Plans are approximate. Unless otherwise shown in the Plans, Department owned underground facilities will not be located by the Department nor through notification to "Sunshine 811".

Whenever the Contractor's activities damage such existing property, other than wetlands, mangroves, seagrass, and protected habitats, immediately restore it to a condition equal to or better than that existing at the time such damage occurred, at no expense to the Department. If damage to wetlands, mangroves, seagrass or other protected habitat occurs, immediately contact the Engineer. The Engineer will authorize restoration activities. Temporary repairs may be used to immediately restore ITS facilities and traffic control signals and devices. Permanent repairs to ITS facilities and traffic control signals and devices shall be made within 90 days of any temporary repairs and prior to final acceptance of the project. Submit permanent ITS facility repair plans to the Engineer prior to beginning repair work.

Protect existing bridges during the entire construction period from damage caused by the Work. Immediately repair, at no expense to the Department, all damage to existing bridges caused by the Work, prior to continuing the Work. The Department will not require the Contractor to provide routine repairs or maintenance for such structures.

Direct special attention to the protection of all geodetic monuments, horizontal or vertical, and Public Land Survey Corners located within the project. If any geodetic monument or Public Land

Survey Corner, located within the project, is at risk of being damaged or destroyed, immediately notify the Engineer. Locate and replace any damaged or destroyed geodetic monuments or Public Land Survey Corners under the direction of a Professional Surveyor and Mapper registered in the State of Florida.

Whenever the actions of a third party damage such existing property and is not otherwise due to any fault or activities of the Contractor, either restore it to a condition equal to or better than that existing at the time such damage occurred or provide access and coordinate with the Department's maintenance Contractor in accordance with 8-4.4 as directed by the Engineer. The Department will compensate the Contractor for the costs associated with the repairs for restoring the existing property in accordance with 4-4. Theft and vandalism are considered damage caused by a third party.

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – PRESERVATION OF EXISTING PROPERTY – UTILITIES – ARRANGEMENTS FOR PROTECTION OR ADJUSTMENT.

(REV 10-5-16) (1-18)

SUBARTICLE 7-11.5.1 is deleted and the following substituted:

7-11.5.1 Arrangements for Protection or Adjustment: Do not commence work at points where the construction operations are adjacent to utility facilities until all necessary arrangements have been made for removal, temporary removal, relocation, de-energizing, deactivation or adjustment with the utility facilities owner to protect against damage that might result in expense, loss, disruption of service, or other undue inconvenience to the public or to the owners. The Contractor is solely and directly responsible to the owners and operators of such properties for all damages, injuries, expenses, losses, inconveniences, or delays caused by the Contractor's operations.

Do not request utility removal, temporary removal, relocation, de-energizing, deactivation, or adjustment when work can be accomplished within the utility work schedules. In the event that removal, temporary removal, relocation, de-energizing, deactivation, or adjustment of a utility or a particular sequence of timing in the relocation of a utility is necessary and has not been addressed in a utility work schedule, the Engineer will determine the necessity for any such utility work. Coordinate such work as to cause the least impediment to the overall construction operations and utility service. The Department is not responsible for utility removal, temporary removal, relocation, de-energizing, deactivation, or adjustment work where such work is determined not necessary by the Engineer or done solely for the benefit or convenience of the utility owner or its contractor, or the Contractor.

Perform exploratory excavation in the alignment and grade of proposed pipes, structures, french drains, slab covered trenches, conduits, pole foundation and/or sub-grade seven days in advance of its construction. Provide underground utility owners and the Department with a seven days advance notice of any conflict with proposed construction. Provide survey information about existing utility alignment, grade and possible conflicts. Payment for pre-trenching, survey and backfilling shall be included in the cost of the related bid item for the proposed installation.

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – PRESERVATION OF EXISTING PROPERTY - UTILITIES – UTILITY ADJUSTMENTS (UTILITY WORK SCHEDULES).

(REV 11-10-16) (FA 1-26-17) (1-18)

SUBARTICLE 7-11.5.3 is expanded by the following:

The utility work which will be accomplished concurrently with the highway construction Contract will involve facilities owned by other agencies. Utility Schedules (Utility Relocation and/or Work Schedules) for these agencies are posted on the Department's website at the following URL address:

<https://ftp.fdot.gov/public/folder/HkSWIK59G0qRNsAJUh3xXg/permitsandorutilityworkschedules>. Take responsibility to obtain this information and comply with all requirements posted on this website up through five calendar days before the opening of bids.

Where utility work must be coordinated with highway construction operations, the portion of the anticipated utility work period covering such concurrent work may or may not begin on the day highway construction commences and may or may not be consecutive days.

The anticipated scheduling of new work, adjustments and/or relocation work is included on the Utility Schedules.

More precise scheduling to accomplish utility work in the most expeditious manner that is feasible will be established at the preconstruction conference as provided in 8-3.5.

The Utility Schedules shall be used in conjunction with the utility sheets included in the roadway plans.

If the Department's website cannot be accessed, contact the Department's Specifications office Web Coordinator at (850) 414-4101.

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC - EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS.

(REV 4-25-02) (FA 7-17-02) (1-18)

SECTION 7 is expanded by the following:

7-27 Equal Employment Opportunity Requirements.

7-27.1 Equal Employment Opportunity Policy: Accept as the operating policy, the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their age, race, color, religion, national origin, sex, or disability and to promote the full realization of equal employment opportunity through a positive continuing program:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their age, race, religion, color, national origin, sex, or disability. Such action must include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

7-27.2 Equal Employment Opportunity Officer: Designate and make known to the Department's contracting officers an equal employment opportunity officer (hereinafter referred to as the EEO Officer) who must be capable of effectively administering and promoting an active Contractor

program employment opportunity and who must be assigned adequate authority and responsibility to do so.

7-27.3 Dissemination of Policy: All members of the Contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the Contractor's equal employment opportunity policy and contractual responsibilities.

7-27.4 Recruitment: When advertising for employees, include in all advertisements for employees the notation "An Equal Opportunity Employer".

7-27.5 Personnel Actions: Establish and administer wages, working conditions, employee benefits, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination without regard to age, race, color, religion, national origin, sex, or disability.

Follow the following procedures:

(1) Conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

(2) Periodically evaluate the spread of wages paid with each classification to determine any evidence of discriminatory wage practices.

(3) Periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action must include all affected persons.

(4) Investigate all complaints of alleged discrimination made in connection with obligations under this Contract, attempt to resolve such complaints, and take appropriate corrective action. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action must include such other persons. Upon completion of each investigation inform every complainant of all of the avenues of appeal.

7-27.6 Subcontracting: Use the best efforts to ensure subcontractor compliance with their equal employment opportunity policy.

7-27.7 Records and Reports: Keep such records as are necessary to determine compliance with the equal employment opportunity obligations. The records kept will be designed to indicate the following:

(1) The number of minority and nonminority group members employed in each work classification on the project.

(2) The progress and efforts being made in cooperation with unions to increase minority group employment opportunities (applicable only to Contractors who rely in whole or in part on unions as a source of their work force).

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority group employees as deemed appropriate to comply with their Equal Employment Opportunity Policy.

(4) The progress and efforts being made in securing the services of minority group subcontractors or subcontractors with meaningful minority group representation among their employees as deemed appropriate to comply with their Equal Employment Opportunity Policy.

All such records must be retained for a period of three years following completion of the contract work and be available at reasonable times and places for inspection by authorized representatives to the Department and the Federal Highway Administration.

Upon request, submit to the Department a report of the number of minority and nonminority group employees currently engaged in each work classification required by the Contract work.

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – PREFERENCE TO STATE RESIDENTS.**(REV 1-13-12) (1-18)**

SECTION 7 is expanded by the following new Article:

7-28 Preference to State Residents.

Florida Statutes 255.099 (Chapter 2010-147, Section 50, Laws of Florida), providing for preference to residents of the State of Florida, is hereby made a part of this Contract:

Each contract that is funded by state funds must contain a provision requiring the contractor to give preference to the employment of state residents in the performance of the work on the project if state residents have substantially equal qualifications to those of nonresidents.

As used in this Section, the term “substantially equal qualifications” means the qualification of two or more persons among whom the employer cannot make a reasonable determination that the qualifications held by one person are better suited for the position than the qualifications held by the other person or persons.

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – E-VERIFY.**(REV 6-13-11) (FA 6-16-11) (1-18)**

SECTION 7 is expanded by the following new Article:

7-29 E-Verify.

The Contractor shall utilize the U.S. Department of Homeland Security’s E-Verify system to verify the employment eligibility of all new employees hired by the Contractor during the term of the Contract and shall expressly require any subcontractors performing work or providing services pursuant to the Contract to likewise utilize the U.S. Department of Homeland Security’s E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the Contract term.

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – SCRUTINIZED COMPANIES.**(REV 4-20-16) (1-18)**

SECTION 7 is expanded by the following new Article:

7-30 Scrutinized Companies.

For Contracts \$1,000,000 and greater, if the Department determines the Contractor submitted a false certification under Section 287.135(5) of the Florida Statutes, or if the Contractor has been placed on the Scrutinized Companies with Activities in the Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List, the Department shall either terminate the Contract after it has given the Contractor notice and an opportunity to demonstrate the Department’s determination of false certification was in error pursuant to Section 287.135(5)(a) of the Florida Statutes, or maintain the Contract if the conditions of Section 287.135(4) of the Florida Statutes are met.

PROSECUTION AND PROGRESS - PROSECUTION OF WORK (SUBMISSION OF WORKING SCHEDULE).

(REV 11-13-14) (FA 1-22-15) (1-18)

SUBARTICLE 8-3.2 is deleted and the following substituted:

8-3.2 General: For this Contract submit the following schedules and reports.

8-3.2.1 Contract Schedule: Submit to the Engineer for acceptance a Critical Path Method (CPM) Contract Schedule for the project within 30 calendar days after execution of the Contract or at the preconstruction conference, whichever is earlier.

The Contract Schedule shall include detailed schedule diagrams and schedule data as described below for the entire Contract Period. The Contract Schedule shall be consistent with the Contract Maintenance of Traffic plan, showing activities for each discrete Contract activity to be accomplished within each Maintenance of Traffic phase. Include activities for deliverables and reviews in the schedule. Sufficient liaison shall be conducted and information provided to indicate coordination with utility owners having facilities within the project limits. The schedule must reflect the utility adjustment schedules included in the Contract Documents, unless changed by mutual agreement of the utility company, the Contractor and the Department.

Failure to include any element of work or any activity relating to utility work will not relieve the Contractor from completing all work within the Contract Time at no additional time or cost to the Department, notwithstanding the acceptance of the schedule by the Department.

The Contract Schedule may indicate a completion date in advance of the expiration of Contract Time. However, the Department will not be liable in any way for the Contractor's failure to complete the project prior to expiration of Contract Time. Any additional costs, including extended overhead incurred between the Contractor's scheduled completion date and the expiration of Contract Time, shall be the responsibility of the Contractor. The Contractor shall not be entitled to claim or recover any such costs from the Department.

The Engineer will withhold monthly payments due for failure of the Contractor to submit an acceptable schedule or monthly updates within the time frame described herein.

8-3.2.2 Schedule Submissions: Develop the schedule in Precedence Diagram Method (PDM) format. All schedule submittals, shall have a copy of the schedule files on a Windows compatible CD or DVD attached. The files shall be in a Primavera format. Make sure to use "Back up" menu selection and ensure that the option "Remove access list during backup" is checked.

Each schedule submission and monthly update shall include a minimum of the following four items:

1. A Critical Path Method (CPM) Network Diagram in time-scale logic diagram, by week starting on Monday, grouped (banded) by phase and location and sorted by early start days. Prominently identify the critical path activities, defined as the longest continuous path of work activities. Submit the Network Diagram, printed in color on D size, 22 inches by 34 inches or E size, 34 inches by 44 inches paper. The network diagram shall contain, as a minimum, the following information for each schedule activity: identification, activity description, total duration, remaining duration, early start date, late finish date, and total float.

2. A report with the following schedule activity information for each construction activity: identification, description, original duration, remaining duration, early start, early finish, total float, percent complete, and budgeted cost. The bar chart diagram shall not be included in this report. It will be submitted on 8.5 inches by 11 inches paper.

3. A schedule narrative report describing current project schedule status and identifying potential delays. This report will include a description of the progress made since the previous schedule submission and objectives for the upcoming 30 calendar days. It will be submitted on 8.5 inches by 11 inches paper. This report shall at a minimum include the following information:

- a. This report shall indicate if the project is on schedule, ahead of schedule or behind schedule. If the project is ahead of schedule or behind schedule, the report shall include the specific number of calendar days. If the project is behind schedule, the report shall include a detailed recovery plan that will put the project back on schedule or include a properly supported request for Time Extension.
 - b. The report will describe the current critical path of the project and indicate if this has changed in the last 30 calendar days. Discuss current successes or problems that have affected either the critical path's length or have caused a shift in the critical path within the last 30 calendar days. Identify specific activities, progress, or events that may reasonably be anticipated to impact the critical path within the next 30 calendar days, either to affect its length or to shift it to an alternate path.
 - c. List all schedule logic or duration changes that have been made to the schedule since the previous submission. For each change, describe the basis for the change and specifically identify the affected activities by identification number.
 - d. Identify any and all activities, either in progress or scheduled to occur within the following 30 days that require Department participation, review, approval, etc.
4. A copy of the schedule files on a Windows compatible CD or DVD in Primavera format.

The Engineer will have 30 days to accept the Contract Schedule or to schedule a meeting, if needed, within that time, with the Contractor to resolve any problems that prevent acceptance of the schedule. Attend the meeting scheduled by the Engineer, and submit a corrected schedule to the Engineer within seven days after the meeting. The process will be continued until a Contract Schedule is accepted by the Engineer.

Upon the Engineer's acceptance of the Contract Schedule, submit monthly updates of the Contract Schedule reflecting progress through the monthly estimate cut-off date within 7 calendar days after the monthly estimate cut-off date.

8-3.2.3 Schedule Content: All schedule submissions shall comply with the following content guidelines as appropriate to the specific submission:

Outline Schedule Diagrams and Data shall show the sequence, order, and interdependence of major construction milestones and activities. Include ordering and procurement of major materials and equipment, long-lead time items, and key milestones identified by the Contract. Identify planned work schedule(s) and include all non-workdays. Provide a description of each major construction activity or key milestone.

Detailed Schedule Diagrams shall include activity number, description, early dates, float, and all relationships (i.e. logic ties), resources and costs. Show the sequence, order, and interdependence of activities in which the work is to be accomplished. Include allowance for Department oversight, acceptance and return of submittals, samples and shop drawings where Department acceptance is specifically required (in accordance with 5-1.4.6 of the standard specifications). In addition to construction activities, detailed network activities shall include the submittals, procurement, and Department or Utility activities impacting progress:

1. Submittal activities shall include oversight and acceptance of submittals. If the Department's action on any submittal is "Not Accepted" or "Revise and Resubmit", a new series of submittal preparation activities shall be inserted into the schedule. Predecessor for the new submittal preparation activity will be the original acceptance activity and the successor of the new acceptance activity will be the fabrication/delivery activity for the equipment or material.

2. Procurement activities shall include all materials and equipment, receipt of materials with estimated procurement costs of major items for which payment of stockpiled materials will be requested in advance of installation, fabrication of special material and equipment, and their installation and testing.

3. Show activities of the Department or Utilities that affect progress and contract-required dates for completion of all or parts of the work.

Detailed Schedule Data: shall conform to the following:

1. All activities shall be assigned to a specific calendar within the software. Specific calendars will be defined within the software to include planned work days. These calendars will include both Contractor and Contract defined holidays and suspension days as non-workdays.

2. Each schedule activity shall be cost loaded. Activity cost loading shall be consistent with the bid breakdown. The sum total of the activity cost loading shall be equal to the current contract value, and should not include bid items.

3. At a minimum, each schedule activity shall contain codes by:

a. Responsibility: including, but not be limited to, Department, Utility, Contractor/Subcontractor, Supplier/Vendor, Consultant, etc.

b. Phasing: identify the appropriate Maintenance of Traffic phase or subphase.

4. Key milestones as identified by contract. At a minimum, the start and finish of each Maintenance of Traffic phase or subphase shall be represented by a milestone activity.

5. All non-procurement activities must be less than or equal to 20 workdays unless approved by the Engineer to be greater by the Engineer.

6. Detailed description of each activity. In each activity, give quantity and unit of measure so that the amount of work the activity involves is clearly communicated.

7. Only two open-ended activities (the first and the last) are allowed.

8. Constraints shall only be used for "Project Start," and "Project Completion." Constraints cannot override logic. The use of any other imposed constraints is not allowed without specific approval by the Engineer. Any other desired constraints must be submitted to the Engineer with the rationale for the use of each desired additional constraint. If allowed by the Engineer, the rationale should be recorded in the activity's log field. Mandatory constraints (start and finish) violate network logic and shall not be used.

9. Out of sequence progress, if applicable, shall be handled through Retained Logic. Use of the Progress Override option is not appropriate for this project and will not be allowed.

10. Progress shall be calculated based on percent complete.

11. All changes to activities shall be recorded with a note in the activity log field. The log shall include, as a minimum, the date and reason for the change, as well as reference to a document wherein the Engineer acknowledges and accepts the change.

12. The use of resource leveling, either manual or automatic, is prohibited.

8-3.2.4 Weekly Meetings: Attend weekly meetings scheduled by the Engineer to discuss Contract progress, near term scheduled activities, including utility relocations, problems and their proposed solutions. Submit a Two-Week "Look Ahead" Planning Schedule at each weekly meeting, showing the items of work planned for the next two weeks. Develop the schedule in Bar Chart format, identifying current and planned activities and related Contract Schedule work activities, including subcontractor work. Designate all activities that are controlling work items as determined by the currently accepted Contract Schedule. A report shall be submitted at each weekly meeting identifying schedule activity progress including actual start or finish dates achieved for any activities.

8-3.2.5 Float: Float is defined as the amount of time the finish of an activity can be delayed. Two kinds of float are possible: Total float is how much an activity can be delayed without

affecting the finish date of the project or an intermediate deadline (constraint); it is the difference between the late finish date and the early finish date. Free float is how much an activity can be delayed without affecting its earliest successor.

Float is not for the exclusive use or benefit of either the Department or the Contractor.

Use of float suppression techniques, such as preferential sequencing (arranging critical path through activities more susceptible to Department caused delay), special lead/lag logic restraints, zero total or free float constraints, extended activity times, or imposing constraint dates other than as required by the contract, shall be cause for rejection of the project schedule or its updates. The use of Resource Leveling (or similar software features) used for the purpose of artificially adjusting activity durations to consume float and influence the critical path is expressly prohibited.

Negative float shall not be a basis for requesting time extensions. Any extension of time shall be addressed in accordance with 8-3.2.6 Time Extensions. Scheduled completion date(s) that extend beyond the contract completion date (evidenced by negative float) may be used in computations for assessment of payment withholdings. The use of this computation is not to be construed as a means of acceleration.

8-3.2.6 Time Extensions: The Contractor is responsible for submitting a request for Contract Time extension in accordance with 8-7.3.2 of the standard specifications. An extension of time for performance shall be considered only to the extent that a delay to an activity or activities exceeds the total float along the project critical paths within the current approved schedule.

As a minimum, time extension requests shall contain:

1. A descriptive summary of the changes
2. An analysis of project impact
3. A fragnet that shows the impacted activities before the change
4. A fragnet that shows the impacted activities after the change

Time extensions shall not be considered for proposals that do not include full documentation for the schedule change. Once a change has been approved by the Engineer, the specific activities and the overall schedule must be updated.

8-3.2.7 Performance of Work: By submitting a schedule the Contractor is making a positive assertion that the project will be constructed in the order indicated on the schedule. Prosecute the work in accordance with the latest accepted Working Schedule. Any costs associated with meeting milestones and completing the project within the authorized Contract Time will be borne solely by the Contractor.

8-3.2.8 As-Built Schedule: As a condition for Final Acceptance of the project, submittal of an as-built schedule which describes the actual order and start and stop times for all activities by the Contractor is required.

PROSECUTION AND PROGRESS

(REV 11-22-16)

SUBARTICLE 8-3.3 is deleted and the following substituted:

8-3.3 Beginning Work: Notify the Engineer not less than five days in advance of the planned start day of work. Upon the receipt of such notice, the Engineer may give the Contractor Notice to Proceed and may designate the point or points to start the work. In the Notice to Proceed, the Engineer may waive the five day advance notice and authorize the Contractor to begin immediately. Notify the Engineer in writing at least two days in advance of the starting date of important features of the work. Do not commence work under the Contract until after the Department has issued the Notice to Proceed. The

Department will issue the Notice to Proceed within 20 calendar days, excluding Saturdays, Sundays and Holidays, after execution of the Contract.

Notify the Engineer and District Environmental Permits Coordinator and submit an anchoring plan not less than two weeks prior to barge use to obtain approval of anchoring locations.

Notify the Engineer not less than 72 hours prior to any ground-disturbing activity in the area(s) noted in the plans to arrange for the archaeological monitor.

PROSECUTION AND PROGRESS - PROSECUTION OF WORK – REGIONAL DISPUTES REVIEW BOARD.

(REV 1-4-11) (FA 1-21-11) (1-18)

ARTICLE 8-3 is expanded by the following new Subarticle:

8-3.7 Regional Disputes Review Board: For this Contract, a Disputes Review Board will be available to assist in the resolution of disputes and claims arising out of the work on the Contract.

8-3.7.1 Purpose: The Board will provide special expertise to assist in and facilitate the timely and equitable resolution of disputes and claims between the Department and the Contractor in an effort to avoid construction delay and future claims.

It is not intended that the Department or the Contractor default on their normal responsibility to cooperatively and fairly settle their differences by indiscriminately assigning them to the Board. It is intended that the Board encourage the Department and Contractor to resolve potential disputes or claims without resorting to this alternative resolution procedure.

The Board will be used when normal Department-Contractor dispute or claim resolution is unsuccessful. Either the Department or the Contractor may refer a dispute or claim to the Board. Referral to the Board should be initiated as soon as it appears that the normal dispute resolution effort is not succeeding. Referral to the Board is accomplished by providing a position paper outlining the nature and scope of the dispute or claim and describing the basis for entitlement to the dispute or claim. Only disputes or claims that have been duly preserved under the terms of the Contract as determined by the Board will be eligible to be heard by the Board. Requests for equitable adjustment must be certified as required by 4-3.2. Claims that are referred to the Board must be in compliance with 5-12. It is a condition of this Contract that the parties shall use the Dispute Review Board. The completed DRB hearing of any unresolved disputes or claims is a condition precedent to the Department or the Contractor having the right to initiate arbitration, other alternative resolution procedures, or to file a lawsuit, as provided by law on such unresolved disputes or claims.

The recommendations of the Board will not be binding on either the Department or the Contractor.

The Board will fairly and impartially and without regard to how or by whom they may have been appointed, consider disputes or claims referred to it and will provide written recommendations to the Department and Contractor to assist in the resolution of these disputes or claims.

8-3.7.2 Continuance of Work: During the course of the Disputes Review Board process, the Contractor will continue with the work as directed by the Engineer in a diligent manner and without delay or otherwise conform to the Engineer's decision or order, and will be governed by all applicable provisions of the Contract. Throughout any protested work, the Contractor will keep complete records of extra costs and time incurred. The Contractor will permit the Engineer and Board access to these and any other records needed for evaluating the disputes or claims.

8-3.7.3 Membership: The Disputes Review Board will consist of members pre-selected by the Engineer and the President of the Florida Transportation Builders' Association (FTBA), and posted on the Department's Website.

If during the life of the contract, a Board member has a discussion regarding employment or entered into any agreement for employment after completion of the contract with the Department, the Contractor or any subcontractor or supplier on the project, he/she shall immediately disclose this to the Contractor and the Department and shall be disqualified from serving on the Board.

Once established, the Board will remain active and in full force and effect. If, after the Department has made final acceptance of the project, there are unresolved disputes and claims remaining, the Disputes Review Board shall remain active and in full force and effect until the project is otherwise administratively closed by the Department following final payment so that the Board may continue in operation until all unresolved disputes and claims are resolved.

8-3.7.4 Procedure and Schedules for Disputes Resolution: Disputes and claims will be considered as quickly as possible, taking into consideration the particular circumstances and the time required to prepare detailed documentation. Steps may be omitted as agreed by the Department and the Contractor and the time periods stated below may be shortened in order to hasten resolution.

a. If the Contractor objects to any decision, action or order of the Engineer, the Contractor may file a written protest with the Engineer, stating clearly and in detail the basis for the objection, within 15 days after the event.

b. The Engineer will consider the written protest and make his decision on the basis of the pertinent contract provisions, together with the facts and circumstances involved in the dispute or claim. The Engineer's decision will be furnished in writing to the Contractor within 15 days after receipt of the Contractor's written protest.

c. This decision will be final and conclusive on the subject, unless a written appeal to the Engineer is filed by the Contractor within 15 days of receiving the decision. Should the Contractor preserve its protest of the Engineer's decision, the matter can be referred to the Board by either the Department or the Contractor.

d. Upon receipt by the Board of a written duly preserved protest of a dispute or claim, either from the Department or the Contractor, it will first be decided when to conduct the hearing.

e. Either party furnishing any written evidence or documentation to the Board will furnish copies of such information to the other party a minimum of 15 days prior to the date the Board sets to convene the hearing for the dispute or claim. If the Board requests any additional documentation or evidence prior to, during, or after the hearing, the Department and/or Contractor will provide the requested information to the Board and to the other party.

f. The Contractor and the Department will each be afforded an opportunity to be heard by the Board and to offer evidence. Neither the Department nor the Contractor may present information at the hearing that was not previously distributed to both the Board and the other party.

g. The Board's recommendations for resolution of the dispute or claim will be given in writing to both the Department and the Contractor, within 15 days of completion of the hearings. In cases of extreme complexity, both parties may agree to allow additional time for the Board to formulate its recommendations. The Board will focus its attention in the written report to matters of entitlement and allow the parties to determine the monetary damages. If both parties request, and sufficient documentation is available, the Board may make a recommendation of monetary damages.

h. Within 15 days of receiving the Board's recommendations, both the Department and the Contractor will respond to the other and to the Board in writing, signifying either acceptance or rejection of the Board's recommendations. The failure of either party to respond within the 15 day period will be deemed an acceptance of the Board's recommendations by that party. If the Department and the Contractor are able to resolve the dispute or claim with or without the aid of the Board's recommendations, the Department will promptly process any required Contract changes.

i. Should the dispute or claim remain unresolved, either party may seek reconsideration of the decision by the Board only when there is new evidence to present. No provisions in this Specification will abrogate the Contractor's responsibility for preserving the request for equitable adjustment in accordance with 4-3.2 or the Contractor's responsibility for preserving a claim filed in accordance with 5-12.

Although both the Department and the Contractor should place great weight on the Board's recommendation, it is not binding. If the Board's recommendations do not resolve the dispute or claim, all records and written recommendations of the Board will be admissible as evidence in any subsequent dispute resolution procedures.

8-3.7.5 Contractor Responsibility: The Contractor shall furnish to each Board member a set of all pertinent documents which are or may become necessary for the Board, except documents furnished by Department, to perform their function. Pertinent documents are any drawings or sketches, calculations, procedures, schedules, estimates, or other documents which are used in the performance of the work or in justifying or substantiating the Contractor's position. A copy of such pertinent documents must also be furnished to the Department.

Except for its participation in the Board's activities as provided in the construction Contract and in this Agreement, the Contractor will not solicit advice or consultation from the Board or any of its members on matters dealing in any way with the project, the conduct of the work or resolution of problems.

8-3.7.6 Department Responsibilities: Except for its participation in the Board's activities as provided in the construction Contract and in this Agreement, the Department will not solicit advice or consultation from the Board or any of its members on matters dealing in any way with the project, the conduct of the work or resolution of problems.

The Department shall furnish the following services and items:

a. **Contract Related Documents:** The Department shall furnish each Board member a copy of all Contract Documents, supplemental agreements, written instructions issued by the Department to the Contractor, or other documents pertinent to the performance of the Contract and necessary for the Board to perform their function. A copy of such pertinent documents must also be furnished to the Contractor.

b. **Coordination and Services:** The Department, in cooperation with the Contractor, will coordinate the operations of the Board. The Department, through the Project Engineer, will arrange or provide conference facilities at or near the Contract site and provide secretarial and copying services.

8-3.7.7 Limitation for Referral of Disputes or Claims to the Board: Any disputes or claims that were not resolved prior to Final Acceptance of the project pursuant to 5-11 must be referred to the Board within 90 calendar days after Final Acceptance for projects with an original Contract amount of \$3,000,000 or less, and within 180 calendar days after Final Acceptance on projects with an original Contract amount greater than \$3,000,000. Only duly preserved disputes or claims will be eligible to be heard by the Board. Failure to submit all disputes or claims to the Board within aforementioned timeframe after Final Acceptance constitutes an irrevocable waiver of the Contractor's dispute or claim.

8-3.7.8 Basis of Payment: A per hearing cost of \$8,000 has been established by the Department for providing compensation for all members of the Dispute Review Board for participation in an actual hearing. The Board chairman will receive \$3,000 for participation in the hearing while the remaining two members will receive \$2,500 each. The Department and the Contractor will equally provide compensation to the Board for participation in an actual hearing. The Department will compensate the Contractor \$4,000 as its contribution to the hearing cost. Such payment will be full and complete compensation to the Board members for all expenses related to the hearing. This includes travel, accommodations, meals, pre- and post- hearing work, review of position papers and any rebuttals, conducting the hearing, drafting and issuance of recommendations, readdressing any requests for

clarification. It is not intended for hearings to last longer than a single day, however, in some cases they may. Any additional time and/or compensation for a hearing would only be allowed upon prior written approval of the Department and the Contractor. If an additional day(s) is granted for the hearing, it will be at \$3,300 per day, payment of which is equally split between the Department and the Contractor. Payment shall be made by issuing a work order against contingency funds set aside for this Contract.

The Department will prepare and mail minutes and progress reports, will provide administrative services, such as conference facilities and secretarial services, and will bear the cost of these services. If the Board desires special services, such as legal consultation, accounting, data research, and the like, both parties must agree, and the costs will be shared by them as mutually agreed.

PROSECUTION AND PROGRESS - PROSECUTION OF WORK – STATEWIDE DISPUTES REVIEW BOARD.

(REV 1-4-11) (FA 1-21-11) (1-18)

ARTICLE 8-3 is expanded by the following new Subarticle:

8-3.8 Statewide Disputes Review Board: For this Contract, a Statewide Disputes Review Board will be available to assist in the resolution of disputes and claims arising out of the administration and enforcement of a specification when such specification specifically refers disputes to this Board.

8-3.8.1 Purpose: The Board will provide special expertise to assist in and facilitate the timely and equitable resolution of the disputes and claims between the Contractor and the Department.

It is not intended that the Department or the Contractor default on their normal responsibility to cooperatively and fairly settle their differences by indiscriminately assigning them to the Board. It is intended that the Board encourage the Department and Contractor to resolve potential disputes or claims without resorting to this alternative resolution procedure.

The Board will be used when normal Department-Contractor dispute or claim resolution is unsuccessful. Either the Department or the Contractor may refer a dispute or claim to the Board. Referral to the Board should be initiated as soon as it appears that the normal dispute resolution effort is not succeeding. Referral to the Board is accomplished by providing a position paper outlining the nature and scope of the dispute or claim and describing the basis for entitlement to the dispute or claim. Only disputes or claims that have been duly preserved under the terms of the Contract as determined by the Board will be eligible to be heard by the Board. Requests for equitable adjustment must be certified as required by 4-3.2. Claims that are referred to the Board must be in compliance with 5-12. It is a condition of this Contract that the parties shall use the Statewide Disputes Review Board.

The recommendations of the Board will be binding on both the Department and the Contractor.

The Board will fairly and impartially and without regard to how or by whom they may have been appointed, consider disputes or claims referred to it and will provide written recommendations to the Department and Contractor to assist in the resolution of these disputes or claims.

8-3.8.2 Membership: The Statewide Disputes Review Board will consist of members pre-selected by the Engineer and the President of the Florida Transportation Builders' Association (FTBA), and posted on the Department's Website.

Members on the Board will be pre-qualified as experts of the type of work being referred to this Board.

If during the life of the contract, a Board member has a discussion regarding employment or entered into any agreement for employment after completion of the contract with the

Department, the Contractor or any subcontractor or supplier on the project, he/she shall immediately disclose this to the Contractor and the Department and shall be disqualified from serving on the Board.

After the Department has made final acceptance of the project, if disputes arise, the Statewide Disputes Review Board shall be activated to hear and rule on the disputed issue.

8-3.8.3 Procedure and Schedules for Disputes Resolution: Disputes or claims will be considered as quickly as possible, taking into consideration the particular circumstances and the time required to prepare detailed documentation. Steps may be omitted as agreed by the Department and the Contractor and the time periods stated below may be shortened in order to hasten resolution.

a. If the Contractor objects to any decision, action or order of the Engineer resulting from the Engineer's evaluation of the guaranteed product or performance period, the Contractor may file a written protest with the Engineer, stating clearly and in detail the basis for the objection, within 15 days after the event.

b. The Engineer will consider the written protest and make his decision on the basis of the pertinent contract provisions, together with the facts and circumstances involved in the dispute. The Engineer's decision will be furnished in writing to the Contractor within 15 days after receipt of the Contractor's written protest.

c. The Engineer's decision will be final and conclusive on the subject, unless the Contractor files a written appeal to the Engineer within 15 days of receiving the decision. Upon the Engineer's receipt of the Contractor's written appeal containing specific protest of all or part of the Engineer's decision, either the Department or the Contractor can refer the matter to the Board.

d. Upon receipt by the Board of a written duly preserved protest of a dispute or claim, either from the Department or the Contractor, it will first be decided when to conduct the hearing.

e. Either party furnishing any written evidence or documentation to the Board will furnish copies of such information to the other party a minimum of 15 days prior to the date the Board sets to convene the hearing for the dispute or claim. If the Board requests any additional documentation or evidence prior to, during, or after the hearing, the Department and/or Contractor will provide the requested information to the Board and to the other party.

f. The Contractor and the Department will each be afforded an opportunity to be heard by the Board and to offer evidence. Neither the Department nor the Contractor may present information at the hearing that was not previously distributed to both the Board and the other party.

g. The Board's recommendations for resolution of the dispute or claim will be given in writing to both the Department and the Contractor, within 15 days of completion of the hearings. The Board will focus its attention in the written report to matters of responsibility for repairs of guaranteed work or performance period as provided for by the Contract Documents.

8-3.8.4 Contractor Responsibility: The Contractor shall furnish to each Board member a set of all pertinent documents that are or may become necessary for the Board, except documents furnished by Department, to perform their function. Pertinent documents are any drawings or sketches, calculations, procedures, schedules, estimates, or other documents which are used in the performance of the work or in justifying or substantiating the Contractor's position. A copy of such pertinent documents must also be furnished to the Department.

Except for its participation in the Board's activities as provided in the construction Contract and in this Agreement, the Contractor will not solicit advice or consultation from the Board or any of its members on matters dealing in any way with the project, the conduct of the work or resolution of problems.

8-3.8.5 Department Responsibilities: Except for its participation in the Board's activities as provided in the construction Contract and in this Agreement, the Department will not solicit advice or consultation from the Board or any of its members on matters dealing in any way with the project, the conduct of the work or resolution of problems.

The Department shall furnish the following services and items:

a. Contract Related Documents: The Department shall furnish each Board member a copy of all Contract Documents, supplemental agreements, written instructions issued by the Department to the Contractor, or other documents pertinent to the performance of the Contract and necessary for the Board to perform their function. A copy of such pertinent documents must also be furnished to the Contractor.

b. Coordination and Services: The Department, in cooperation with the Contractor, will coordinate the operations of the Board. The Department, through the Project Engineer, will arrange or provide conference facilities at or near the Contract site and provide secretarial and copying services.

8-3.8.6 Basis of Payment: A per hearing cost of \$8,000 has been established by the Department for providing compensation for all members of the Dispute Review Board for participation in an actual hearing. The Board chairman will receive \$3,000 for participation in the hearing while the remaining two members will receive \$2,500 each. The Department and the Contractor will equally provide compensation to the Board for participation in an actual hearing. The Department will compensate the Contractor \$4,000 as its contribution to the hearing cost. Such payment will be full and complete compensation to the Board members for all expenses related to the hearing. This includes travel, accommodations, meals, pre- and post- hearing work, review of position papers and any rebuttals, conducting the hearing, drafting and issuance of recommendations, readdressing any requests for clarification. It is not intended for hearings to last longer than a single day, however, in some cases they may. Any additional time and/or compensation for a hearing would only be allowed upon prior written approval of the Department and the Contractor. If an additional day(s) is granted for the hearing, it will be at \$3,300 per day, payment of which is equally split between the Department and the Contractor. Payment shall be made by issuing a work order against contingency funds set aside for this Contract.

The Department will prepare and mail minutes and progress reports, will provide administrative services, such as conference facilities and secretarial services, and will bear the cost of these services. If the Board desires special services, such as legal consultation, accounting, data research, and the like, both parties must agree, and the costs will be shared by them as mutually agreed.

MAINTENANCE OF TRAFFIC.

(REV 10-5-16) (1-18)

SUBARTICLE 102-9.2.1 is deleted and the following substituted:

102-9.2.1 Post Mounted Signs: Meet the requirements of 990-8. Maintain all navigation and regulatory signage within the project area throughout the project duration. Temporarily relocate existing signs as necessary. Cost of relocation shall be paid for under pay item 102-1 "Maintenance of Traffic".

SUBARTICLE 102-9.15 is deleted and the following substituted:

102-9.15 Temporary Signalization and Maintenance: Provide temporary signalization and maintenance at existing, temporary, and new intersections including but not limited to the following:

1. Installation of temporary poles and span wire assemblies as shown in the Plans,
2. Temporary portable traffic signals as shown in the Plans,
3. Adding or shifting signal heads,
4. Trouble calls,

5. Maintaining intersection and coordination timing and preemption devices. Coordination timing will require maintaining functionality of system communications.

Respond to all trouble call dispatches and reported malfunctions of traffic signals within two hours, and restore any loss of operation within 12 hours after notification. Immediately after, clear the dispatches with the Miami-Dade County Department of Transportation and Public Works (DTPW) Traffic Control Center (TCC) Operator or Timing Engineer as shown in the Plans. During down time, at no additional cost to the Department, provide temporary traffic control devices, flagman personnel and law enforcement personnel as necessary to maintain safe and efficient flow of traffic at the affected signalized intersection(s).

Provide traffic signal equipment that meets the requirements of the Design Standards and 603-2. The Engineer may approve used signal equipment if it is in acceptable condition. Replacement components for traffic signal cabinet assemblies will be provided by the maintaining agency.

PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION. (REV 11-22-16)

ARTICLE 104-3 is deleted and the following substituted:

104-3 Control of Contractor's Operations Which May Result in Water Pollution.

Prevent pollution of streams, canals, lakes, reservoirs, and other water impoundments with fuels, oils, bitumens, calcium chloride, or other harmful materials. Also, conduct and schedule operations to avoid or otherwise minimize pollution or siltation of such water impoundments, and to avoid interference with movement of migratory fish. Do not dump any residue from dust collectors or washers into any live stream.

Restrict construction operations in rivers, streams, lakes, tidal waters, reservoirs, canals, and other water impoundments to those areas where it is necessary to perform filling or excavation to accomplish the work shown in the Plans and to those areas which must be entered to construct temporary or permanent structures. As soon as conditions permit, promptly clear rivers, streams, and impoundments of all obstructions placed therein or caused by construction operations.

Do not frequently ford live streams with construction equipment. Wherever an appreciable number of stream crossings are necessary at any one location, use a temporary bridge or other structure.

Except as necessary for construction, do not deposit excavated material in rivers, streams, canals, or impoundments, or in a position close enough thereto, to be washed away by high water or runoff.

Where pumps are used to remove highly turbid waters from enclosed construction areas such as cofferdams or forms, treat the water by one or more of the following methods prior to discharge into State waters: pumping into grassed swales or appropriate vegetated areas or sediment basins, or confined by an appropriate enclosure such as turbidity barriers when other methods are not considered appropriate.

Do not disturb lands or waters outside the limits of construction as staked, except as authorized by the Engineer.

Obtain the Engineer's approval for the location of, and method of operation in, borrow pits, material pits, and disposal areas furnished for waste material from the project (other than commercially operated sources) such that erosion during and after completion of the work will not result in probability of detrimental siltation or water pollution.

When work occurs in, on, over or adjacent to an Outstanding Florida Water (OFW), comply with turbidity requirements of the Outstanding Florida Water (OFW) designation including: no degradation of water quality; no increased turbidity of the water; and, turbidity levels beyond the turbidity control measures cannot exceed 0 Nephelometric Turbidity Units (NTUs) above background levels.

SUBARTICLE 104-6.4 is expanded by the following new Subarticle:

104-6.4.11 Containment Work Plan: Any inspection, maintenance or construction activity, which occurs in or over Waters of the State, will be conducted in such a manner as to prevent any materials from falling in the water. All excess debris and/or materials (solid waste) shall be disposed of in accordance with Rule 62-701.300(a), Fla. Administrative Code, Section 403.708(1)(a) Fla. Statutes.

In order to ensure that all solid waste generated by the activity is prevented from entering Waters of the State and is collected and disposed of in a proper manner, the Contractor shall be required to submit in writing to the Engineer a Containment Work Plan (CWP) for review and approval.

The CWP shall address containment notification and documentation of any accidental discharges and methods for timely remediation of accidental discharges. Approval of the CWP is performance based and should the means and methods chosen by the Contractor fail to prevent any materials from falling in the water, resulting in accidental discharges, the Engineer may stop all work until corrective action is taken to prevent additional discharges into the water. Should work be stopped by the Engineer, no work other than containment, removal or clean up shall take place until the revised CWP is reviewed and approved by the Engineer.

The CWP shall address the following items in sufficient detail acceptable to the Engineer:

- Pre-existing conditions.
- Identification of materials which might possibly be discharged into adjacent surface waters as a result of the proposed activity.
- Methodology to contain all debris and other related materials to prevent entry into the water.
- Methodology for reporting, responding to, documenting and removing all accidental discharges
- Methodology to track all materials (debris, etc.) that shall demonstrate that no material is left in the water.
- Certification that all documented "solid waste" has been removed from the waters, all documented "solid waste" has been disposed of in an approved landfill and pre-existing conditions have not been altered due to the operations performed.

INTEGRAL PILE AND COLUMN JACKETS.

(REV 1-7-16) (FA 1-14-16) (1-18)

The following new Section is added after Section 455:

SECTION 457 INTEGRAL PILE AND COLUMN JACKETS

457-1 Description.

Furnish, fabricate and install an integral pile and column jacket in accordance with the Contract Documents.

457-2 Materials.

457-2.1 Stay-In-Place Forms: Use forms composed of a durable, inert, corrosion resistant material with an interlocking joint along one or two sides that permits the form to be assembled and sealed in place around the pile or column. Fabricate the forms from glass or carbon fibers and polyester or vinylester resins. Provide jackets with a minimum thickness of 1/8 inch with a minimum thickness at the corners of 3/16 inch and dimensions as shown in the Contract Documents. Ensure the form is capable of maintaining its original shape without additional support or damage when placed around a pile. Ensure the inside face of the form has no bond inhibiting agents in contact with the filler material. Provide the forms with bonded or bolted-on, non-metallic, adjustable standoffs to maintain the forms in the required positions. Sandblast or score the inside surface of the forms with an abrasive material to provide a rough surface texture and ensure bond with the filler material. Equip the forms with a compressible sealing strip at the bottom which will effectively seal the annular space between the pile or column and the form. Use non-metallic hardware for pumping ports when these are provided. Fabricate the jacket form in a workmanlike manner and have it inspected and approved by the Engineer prior to placement. Remove from the project any jacket form that has been rejected.

The forms shall meet the following physical property requirements of Table 1:

Table 1: Physical Requirements of Stay-In-Place Forms	
Water Absorption (ASTM D 570)	1% maximum
Ultimate Tensile Strength (ASTM D 638)*	9,000 psi minimum
Flexural Strength (ASTM D 790)*	16,000 psi minimum
Modulus of Elasticity (ASTM D 790)	700,000 psi minimum
IZOD Impact (ASTM D 256)	15 lb/inch minimum (unnotched specimen)
Barcol Hardness (ASTM D 2583)	45 minimum
Color: Similar to Federal Color Standard No. 595, Table VII, Shade No. 36622. The color must be integral in the form gel coat.	
* On original specimens whose flat surfaces are not machined to disturb the fiberglass.	

457-2.2 Anode Material: Use expanded mesh anodes pre-installed inside the form by the manufacturer when cathodic protection integral pile or column jackets are specified. Use anode type and configuration shown in the Contract Documents. If galvanic anodes are used, place the anodes in direct contact with the inside face of the form.

457-2.3 Fillers: Use portland cement grout fillers for non-structural jackets and concrete fillers for structural jackets unless otherwise specified in the Contract Documents.

457-2.3.1 Portland Cement Grout: Use a mix design of portland cement, fine aggregate, water and an admixture containing a minimum of 940 pounds of cementitious material per cubic yard. Up to 30%, by weight of cement, may be replaced by fly ash for standard pile jackets. Do not use fly ash, slag, or silica fume for cathodic protection jackets unless specified in the Contract Documents.

Use silica sand fine aggregate meeting the requirements of Section 902.

Use portland cement meeting the requirements of Section 921.

Use admixtures meeting the requirements of Section 924, ASHTO M194, Types A and D.

Use air-entraining admixtures meeting the requirements of Section 924 and containing no chlorides or other salts corrosive to metals.

Use fly ash meeting the requirements of Section 929, ASTM C618, Type F, except that loss on ignition shall not exceed 4%.

Provide a grout filler mix with a minimum compressive strength of 5,000 psi at 28 days and a slump of 7 inches to 9 inches. Submit the design mix to the Engineer for approval by the Department before placing any grout filler.

457-2.3.2 Class IV Concrete: Use Class IV Concrete meeting the requirements of Section 346 with an adjusted slump of 7 inches to 9 inches. Reduced size coarse aggregate may be used as approved by the Engineer. Do not use fly ash, slag, or silica fume for cathodic protection jackets.

Submit the design mix to the Engineer for approval by the Department before placing any concrete filler.

457-2.3.3 Special: When specified, furnish special fillers in accordance with the Contract Documents. Submit test results and documentation that demonstrate the material meets the requirements for the project. Use materials meeting the requirements of 930-7 when cementitious pre-bagged fillers are specified.

457-2.3.4 Chlorides: Total amount of chlorides for jacket fillers shall not exceed 0.4 pounds per cubic yard of filler after placement. Total amount of chloride will be tested at a random basis as directed by the Engineer.

457-2.4 Water: Use water that meets the requirements of Section 923 for all filler mixing. Use potable water for cleaning, rinsing, or any other application that requires direct contact with the piles.

457-2.5 Reinforcing Steel: Use reinforcing steel meeting the requirements of Section 415 for all structural jackets.

457-2.6 Materials Certification and Testing.

457-2.6.1 Certification: For materials other than those for portland cement grout and Class IV concrete, submit a certificate to the Engineer certifying that the materials furnished meet all the requirements of this Section and conform in all respects to the materials tested. Attach current test reports to the certificate.

Submit certified test results of the chemical composition of the anode and submit a manufacturer certification stating that the dimensions and physical characteristics of the anode meet the requirements of the Contract Documents when cathodic protection jackets are specified.

457-2.6.2 Testing: No test report for tests made more than two years prior to shipment will be accepted for the form material.

Test materials for portland cement grout and Class IV concrete as required in Section 346 for approved design mixes. Perform sampling and testing using Quality Control technicians meeting the requirements of Section 105.

Test properties of materials for other cement based fillers allowed under 457-2.3.3 same as required for the Department approved design mixes. Test the materials at a frequency of one set of tests per load of the mixer. For each set of tests, cast three 4 inch by 8 inch cylinders for compressive strength testing at the required test date. The Engineer may adjust the frequency of testing based on consistency of the mixes. Conduct a field verification mix prior to commencing the jacket installation. Cure samples of cement based materials in accordance with ASTM C31.

Hardened concrete or grout will be accepted on the basis of strength test results as defined in this Section. Test the laboratory cured samples for compressive strength at 28 days in a laboratory meeting and maintaining at all times the qualification requirements listed in 105-6.

457-3 Construction.

457-3.1 Shop Drawings: Submit shop drawings and obtain approval prior to field installation. Submit shop drawings showing locations of standoff spacers, method of fastening jacket form to piling, method of sealing the form after assembly, and method for bracing during placement of filler. Include details of access holes, fiberglass caps, method of securing anode from movement, and methods for placing the filler and cutting and sealing the pumping ports.

457-3.2 Surface Preparation: Remove all cracked or delaminated concrete and excavate to a depth of 3/4 inch to 1 inch behind the exposed reinforcement. Limit the size of chipping hammers to 20 pounds unless otherwise approved by the Engineer. Thoroughly clean all pile/column surfaces that the jackets will cover. Remove all oil, grease, dirt, broken concrete, marine growth and any other deleterious

material that could prevent proper bonding. Sandblast all exposed reinforcing steel to SSPC-SP10, near white, per the Society of Protective Coatings, to remove all rust and scale before installing the pile jacket. Water blast or mechanically clean reinforcing steel exposed under water by methods and with equipment approved by the Engineer. Clean existing concrete surfaces by sandblasting, wet blasting, wire brushing, water laser, or other methods approved by the Engineer which will yield an equivalent result. Do not place the form until the surface preparation has been approved by the Engineer.

457-3.3 Cathodic Protection: Provide connection to the reinforcement for cathodic protection integral pile jackets inside the jacket limits unless otherwise specified in the Contract Documents. Use connection methods and materials in accordance with the Contract Documents.

457-3.4 Form Placement: Place the fiberglass form in position around the pile; secure and seal the interlocking joints, and seal the bottom of the form against the pile surface with the compressible seal and an APL listed epoxy mastic suitable for underwater application. Adjust stand-offs as necessary to prevent misalignment and install temporary hard backing to prevent deformation of the jacket. Place a temporary plastic wrap around the form prior to placement of the hardbacking to protect the gel coat.

457-3.5 Filler Placement: Wet to saturation the surface of the existing concrete immediately prior to placing the filler. Place the filler in one continuous pour at no more than 72 hours after surface preparation. Fill the annulus between the pile or column and jacket form following the jacket manufacturer's instructions and the Contract Documents. Do not drop filler material into forms higher than five feet or into forms containing water. Prevent contamination of the filler during placement and provide internal or external vibration to ensure proper consolidation.

Cure filler for a minimum of 96 hours before removing any external bracing. Remove any filler or other extraneous material from the exterior surface of the form and clean the form without damaging the fiberglass or gel coat resin. Cut pumping ports flush with the surface of the jacket and seal opening with an APL listed epoxy.

457-4 Method of Measurement.

The quantities to be paid for under this Section will be the total feet of integral pile or column jacket furnished, installed, completed and accepted. Measure length from bottom of the form to top of the form.

457-5 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section. No separate payment will be made for reinforcing steel or filler material. Include payment for anode material, anode connection accessories, testing, and activation in the price per foot for cathodic protection integral pile jackets. Remove and replace jackets with misalignment exceeding 3/4 inch or CP jackets with the anode electrically shorted to the reinforcement at no additional cost to the Department.

Payment will be made under:

- | | |
|-----------------|---|
| Item No. 457-1- | Standard Integral Pile Jacket - per foot. |
| Item No. 457-2- | Cathodic Protection Integral Pile Jacket – per foot |

SECTION 561

COATING EXISTING STRUCTURAL STEEL

561-1 Description.

Coat existing structural steel in accordance with the requirements of this Section by removing and replacing the existing coating or overcoating the existing coating as stated in the Contract

Documents.

561-2 Materials.

561-2.1 Coating Systems: For removal and replacement systems, use coating products and systems meeting the requirements of Section 975 and are listed on the Department's Approved Product List (APL).

For overcoating systems, use products and systems as designated in the Contract Documents. Submit product data sheets and product Material Safety Data Sheets (SDS), or in lieu of SDS, submit test reports showing percent weight compositional analysis, Chemical Abstract Number, American Conference of Governmental Industrial Hygienists (ACGIH) time weighted average and ceiling exposure limits for all components, and lower and upper explosive limits, flash point, boiling point, amount of volatile organic compounds by weight, and specific gravity for each component of the coating system.

561-2.2 Thinners, Solvents and Cleaners: Meet the requirements of 560-2.2. In addition, for overcoating systems, use thinners, solvents, and cleaners that do not damage the existing coating system.

561-2.3 Caulking: Meet the requirements of 560-2.3.

561-2.4 Soluble Salts Test Kit: Meet the requirements of 560-2.4.

561-2.5 Abrasives: Meet the requirements of 560-2.5.

561-2.6 Rust Preventative Compound: Meet the requirements of 560-2.6.

561-2.7 Storage: Meet the requirements of 560-2.7.

561-3 Equipment.

561-3.1 Compressed Air: Meet the requirements of 560-3.1.

561-3.2 Abrasive Blasting System: Meet the requirements of 560-3.2.

561-3.3 Coating Application System: Meet the requirements of 560-3.3.

561-4 Quality Control (QC).

561-4.1 Field Preparation and Application: QC personnel cannot participate in any production activities, such as abrasive blasting, mixing, and painting. Submit a current Corporate Q C Plan approved by SSPC under the SSPC QP1 and SSPC QP2 certifications as appropriate and a site specific Coating Plan to the Engineer at least 14 calendar days prior to beginning coatings work. Do not begin coatings work until the site specific Coating Plan has been approved by the Engineer. The Plans must include, at a minimum, the following:

- a. Contractor's Organizational Chart clearly identifying line of authority and each individual's project responsibility.
- b. Qualifications and Training of project personnel.
- c. Receipt, Distribution and Revisions of Project Documents.
- d. Quality Control Inspection Standards and Equipment.
- e. Inspection of Cleaning and Painting Equipment and calibration of inspection instruments.
- f. Surface preparation Standards, Equipment and Procedures.
- g. Coatings Application Standards, Equipment and Procedures.
- h. Frequency, type, passing criterion for all QC Tests and Reports.
- i. Repair Procedures.
- j. Materials Control, Handling and Storage.
- k. Adjacent Area Protection Plan
- l. Color coupons (3 each) of finish coat for structural steel (FED-STD-595C, Color No.

25275) Final acceptance of colors will be determined by the Engineer.

Prepare a traffic control plan for each phase of construction activities signed and sealed by the Contractor's Engineer of Record in accordance with the Roadway Plans Preparation Manual. Do not begin work until the traffic control plan is approved by the Engineer. Maintain traffic in accordance with Section 102.

For work over navigable waters, submit a work plan to the United States Coast Guard including any scheduled restrictions to navigation channels or marine traffic. Obtain Coast Guard approval at least 30 days in advance of any restrictions.

561-4.2 Inspection: Meet the requirements of 560-5.3 and conduct all observations and testing required by the contract documents. The following define the minimum inspection hold points. If at any hold point the work or conditions does not meet contract requirements the Contractor must cease work immediately, identify the source of non-conformity, propose corrective action and proceed only after approval of the Engineer or his field representative. The Coating Quality Control Plan must include as a minimum but not limited to the following inspection hold point:

- a. Ambient conditions
- b. Pre-cleaning - Verify the surfaces meet pressure washing, solvent cleaning, and soluble salt level requirements.
- c. Surface Preparation – Verify the surfaces meet abrasive blasting and power tool cleaning requirements
- d. Dry Film Thickness
- e. Visual Application Defects between Coats
- f. Cleanliness between Coats
- g. Recoat Windows

During QC Inspection, document the location and type of each defect. Repair with approved procedure. Notify the Engineer of readiness to proceed with FDOT designated QA inspection. Provide safe, OSHA compliant access for QA inspection personnel. Repair with approved procedure any defects identified by QA inspection personnel. Request 90% inspection by the Department a minimum of 7 days prior to requested inspection date. The size of the area(s) for 90% inspection will be at the discretion of the Department.

561-5 Qualifications.

561-5.1 Field Contractor: Meet the requirements of 560-6.2.

561-5.2 Quality Control (QC) Inspectors: Meet the requirements of 560-6.3.

561-5.3 Certifications: Meet the requirements of 560-6.4.

561-6 Surface Preparation.

561-6.1 General: When portions of the existing coating are designated in the Contract Documents to be removed and replaced, clean, wash, test and remove soluble salts, and abrasive blast or hand and power tool clean to remove all existing coating and corrosion in the intended locations. Feather back the edges of all existing coating to remain a minimum of 3 inches around the area of existing coating removed to provide a smooth transition. Verify the edges of the existing coating are intact by probing with a dull puttyknife in accordance with SSPC SP 2. Roughen the existing coating in the feathered area to ensure proper adhesion of the new coating. Notify the Engineer immediately when any structural steel appears to be defective.

When the existing coating is to remain, clean, wash, and test and remove soluble salts.

Ensure all surfaces to be coated are clean, dry, and free from oil, grease, dirt, dust,

soluble salts, corrosion, peeling coating, caulking, weld spatter, mill scale and any other surface contaminants. Sequence the surface preparations and coating operations so that freshly applied coatings will not be contaminated by dust or foreign matter. Protect all equipment and adjacent surfaces not to be coated from surface preparation operations. Protect working mechanisms against intrusion of abrasive. In the event that any rusting or contamination occurs after the completion of the surface preparation, prepare the surfaces again to the initial requirements.

Perform surface preparation work only when the temperature of the steel surface is at least 5°F above the dew point temperature.

561-6.2 Mechanical Removal of Surface Defects: Meet the requirements of 560-7.2. In addition, remove all pack rust prior to solvent cleaning.

561-6.3 Cleaning: Meet the requirements of 560-7.3.

561-6.4 Washing: Meet the requirements of 560-7.4.

561-6.5 Soluble Salts Detection and Removal: Meet the requirements of 560-7.5 except test five random locations in the first 1000 square feet and one random location for each subsequent 1000 square feet.

561-6.6 Abrasive Blast Cleaning: Meet the requirements of 560-7.6.

561-6.7 Hand and Power Tool Cleaning: Prepare steel by power and hand tool cleaning as defined in SSPC SP 11, SSPC SP 3, and SSPC SP 2 as stated in the Contract Documents. Use SSPC VIS 3 as an aid in establishing cleanliness.

561-7 Surfaces Not to be Coated.

561-7.1 Galvanized Surfaces: Meet the requirements of 560-8.1.

561-7.2 Machine Finished Surfaces: Meet the requirements of 560-8.4.

561-8 Application.

561-8.1 General: Apply a complete coating system to all structural steel surfaces except surfaces indicated in 561-7.

Prior to the application of any coating, inspect the substrate for contamination and defects, and prepare the surface in accordance with 561-6 before application of the next coat.

Apply each coat including a stripe coat in a color that contrasts with the substrate or preceding coat. For exterior surfaces, apply a finish coat color meeting FED-STD-595C, Color No. 25275. The sequence of coating application must be as follows:

- a. Apply a coat of organic zinc rich epoxy primer. Apply prime coat to abrasive blast cleaned or power tool cleaned surfaces within 8 hours of surface preparation.
- b. Brush/Dauber apply a "stripe coat" of aluminum epoxy mastic per Section 561-8.7.
- c. Apply a coat of epoxy intermediate paint.
- d. Brush/Dauber apply a "stripe coat" of aluminum epoxy mastic per Section 561-8.7
- e. Caulk all faying surfaces, crevices, joints, gaps in accordance with Section 560.
- f. Apply a coat of aliphatic polyurethane finish coat.
- g. Perform all aliphatic polyurethane finish coat repairs.
- h. Apply a coat of clear coat polyurethane to surfaces exposed to sunlight.

561-8.2 Weather and Temperature Limitations: Meet the requirements of 560-9.2.

561-8.3 Sealing Using Caulk: Meet the requirements of 560-9.3.

561-8.4 Protection of Adjacent Surfaces: Meet the requirements of 560-9.4.

561-8.5 Mixing and Thinning: Meet the requirements of 560-9.5.

561-8.6 Application Methods: Meet the requirements of 560-9.6.

561-8.7 Stripe Coating: Meet the requirements of 560-9.7. Apply stripe coats by brush and dauber only.

561-8.8 Thickness of Coats: Meet the requirements of 560-9.8.

561-8.9 Coating Drying, and Curing: Apply coatings within the time specified by the coating manufacturer's product data sheet for drying and recoating. Before handling, test for cure in accordance with the manufacturer's recommended method. Meet the requirements of ASTM D5402 for organic zinc primers when the manufacturer's technical data sheet does not state a specified cure test. Obtain the acceptance criteria from the coating manufacturer and report the results to the Engineer.

561-8.10 Coating Finish: Meet the requirements of 560-9.10.

561-9 Touchup and Repair.

Clean and coat all welds, rivets, bolts, and all damaged or defective coating and rusted areas in accordance with 561-6 and 561-8. Upon approval by the Engineer, aluminum mastic may be used in accordance with the manufacturer's recommendations. Aluminum mastic must contain aluminum pigment and minimum 80% volume solids.

561-10 Protection of the Environment, Public, and Workers.

561-10.1 General: Establish plans and programs to protect the environment, public, contractor employees, other workers, and property from overspray, exposure to toxic heavy metals and the release and emission of hazardous materials and nuisance dusts. Include in such plans and programs a procedure for the receipt, processing, evaluation and timely written response for claims by the public for damage resulting from the foregoing work. Submit to the Department any written response which denies such damage claims. Conduct all coating application and removal operations in compliance with EPA, OSHA, and other applicable Federal, State and local regulations. Submit a contingency plan for the remediation of water and land in the event of contamination by solid or liquid paint and contaminated water.

561-10.2 Environmental Protection: Prepare and submit to the Engineer, plans and programs for the protection of the environment and public based on the applicable EPA requirements, the requirements of this Section, and the Contract Documents. Include plans and programs for the protection of the air, soil/ground, and water. At a minimum, the plans shall include:

- a. Soil Protection and Testing
 - i. Soil Contamination Reporting and Clean-up Procedure
 - ii. Pre and Post Project Soil Sampling Plan – number and location of samples.
 - iii. Certifications of the proposed laboratory.
- b. Water Protection and Testing
 - i. Water Contamination Reporting and Clean-up Procedure
 - ii. Water Sampling Plan – number and location of samples.
 - iii. Certifications of the proposed laboratory.
- c. Waste Management
 - i. Waste Handling, Storage, Transportation, Treatment and Disposal Procedures.
 - ii. Laboratory Analysis and Laboratory Certification
 - iii. Location of Waste Storage Site
- d. Ambient Air Monitoring
 - i. Type, number and location of monitors.
 - ii. Monitoring Procedures
 - iii. Laboratory Certification
- e. Visible Emissions Monitoring
 - i. Method
 - ii. Reports
 - iii. Corrective Actions

- f. Regulated Area
 - i. Personal Air Pump Monitoring Plan
 - ii. Laboratory Certification
 - iii. Method of Demarcating Regulated Area
- g. Dust Collection and Containment Ventilation
- h. Emergency Contingency Plans
 - i. Hurricane Evacuation
 - ii. Location of nearest Emergency Medical Treatment Centers
 - iii. First Aid Procedures
 - iv. Spills or Leaks
 - v. Fire or Explosion Prevention and Contingency Plans
- i. Employee Training, to include SSPC C-3 "Deleading of Industrial Structures" and SSPC C-5 (C-3 Refresher Course)
- j. Site Clean-up and De-mobilization Plan
- k. Employee Medical Surveillance Plan
- l. Respirator Program
- m. Working Over or Near Water Safety Plan

561-10.2.1 Pollution Control: Submit a written pollution control and monitoring plan at the preconstruction meeting or as directed by the Engineer which clearly describes the means for complying with all Local, State and Federal regulations including pollution control provisions specified herein. The written plan must be in accordance with SSPC Project Design: Industrial Lead Paint Removal Handbook, Volume II, Phase 6, Environmental Monitoring, and specifically include, but not be limited to, providing a scaled map of the work site layout showing the proposed number and location of soil sampling, Total Suspended Particulate (TSP) monitoring sites, waste storage areas, staging areas, temporary waste storage areas, and ambient air and personnel sampling frequency.

Comply with all applicable Federal, State, and Local rules and regulations.

Immediately cease all operations in the event a violation of any environmental regulation or a failure to properly execute any pollution control provisions occurs. Resume operations after written proposed corrective procedures have been submitted to and approved by the Engineer and implemented.

561-10.2.2 Permits: Submit all required permits from all applicable regulatory agencies to the Engineer prior to the commencement of any work. Seek permit determination from these regulatory agencies to avoid any potential permit non-compliance issues during work activities. The Contractor is responsible for all liability resulting from non-compliance with pertinent rules and regulations including permit requirements.

561-10.2.3 Ambient Air Quality Compliance and Protection of the Air:

561-10.2.3.1 Visible Emissions: Assess the visible emissions using EPA Method 22, Timing of Emissions as defined by 40 CFR 60, Appendix A, Standards of Performance for New Stationary Sources. During abrasive blasting, do not allow visible emissions from a containment to exceed a random cumulative duration of more than one percent of the workday (SSPC Guide 6, Level 1 Emissions). During pressurized water cleaning, do not allow visible emissions from a containment to exceed a random cumulative duration of more than ten percent of the workday (SSPC Guide 6, Level 3 Emissions).

561-10.2.3.2 Total Suspended Particulate (TSP) Matter: Control emissions from the containment area to prevent exceeding the TSP lead of 1.5 $\mu\text{g}/\text{m}^3$ over a 90 day period, or the daily and adjusted daily allowances of SSPC-TU 7. Conduct TSP Lead monitoring in accordance with 40 CFR 50, Appendix B, Reference Method for Determination of TSP Matter in the

Atmosphere (high volume sampler required), and 40 CFR 50, Appendix G, Reference Method for Determination of TSP Matter Collected from Ambient Air. Position the TSP lead monitoring equipment in general accordance with 40 CFR 58, Ambient Air Quality Surveillance.

When lead is present in the coating, perform TSP Lead background monitoring for a period of 3 days prior to the beginning of abrasive blast cleaning operations. Submit the results from background monitoring and the first week of monitoring during abrasive blast cleaning to the Engineer for review within 5 calendar days after the first week of work. Continue monitoring unless otherwise directed by the Engineer.

561-10.2.3.3 Regulated Area: Establish a regulated area around the work site to prohibit unauthorized persons from areas where exposure to hazardous airborne metals may exceed the following action levels:

Airborne Metals	Action Level
Lead	30 $\mu\text{g}/\text{m}^3$
Cadmium	2.5 $\mu\text{g}/\text{m}^3$
Arsenic	5 $\mu\text{g}/\text{m}^3$
Hexavalent Chromium (Cr^{6+})	2.5 $\mu\text{g}/\text{m}^3$

Conduct monitoring in accordance with the National Institute for Occupational Safety and Health (NIOSH) procedures upon initiation of dust producing operations and submit the test results to the Engineer within 72 hours of sampling. Report sample results as eight-hour Time Weighted Averages (TWA). Reestablish the regulated area and perform additional sampling when the results exceed the action levels or when directed by the Engineer. Record all pertinent data. Position air-sampling pumps around the project perimeter where the public or personnel can approach the work area. Place sampler inlets at breathing height. Clearly mark the regulated area by the use of warning signs, rope, barrier tape, or temporary construction fencing.

561-10.2.4 Soil/Ground Quality: Inspect the ground beneath and in proximity to the structure in the presence of the Engineer for visible paint chips to establish an initial job site cleanliness standard. When heavy metals are in the existing coatings, test soil samples prior to the beginning of operations and after project completion for heavy metals. Document the number and specific locations where the initial samples are taken as outlined in the SSPC Project Design-Industrial Lead Paint Removal Handbook, Volume 2 to ensure the post samples are collected from the same locations. Submit all samples to the Engineer for review. If the project activities increase the heavy metal content in soil to more than 20% above the pre-job geometric mean or 100% at any one location, return the site to the pre-job levels. Conduct additional soil testing as necessary to determine the extent of contamination.

For structures less than 14 feet minimum height, take one sample north, south, east, and west (where soil is present) of the structure. If the structure is longer than 14 feet, take one additional sample for every 14 feet in length.

For structures greater than 14 feet minimum height, take two samples north, south, east, and west (where soil is present) of the structure. Locate the inner row of samples within 14 feet of the structure. Locate the outer row of samples at a distance equal to the height of the structure. If the structure is longer than 14 feet, take one additional sample for every 14 feet in length.

In addition, submit a pre- and post- soil sampling plan for storage areas identifying the sample location, depth, analyses list, lab certification, and turnaround time. Once approved by the Engineer, submit sampling results along with a scaled drawing indicating designated sample locations.

561-10.2.5 Water Quality: Do not release, discharge or otherwise cause

hazardous materials, debris, waste, or paint chips to enter the water. Protect against releases due to rain and methods of surface preparation from reaching rivers, streams, lakes, storm drains, or other bodies of water.

561-10.3 Containment System: Submit a written containment system design plan in accordance with this section and the contract documents at the pre-construction conference or as directed by the Engineer which clearly describes the proposed containment system applicable to the intended removal method and in accordance with the requirements outlined herein and SSPC Guide 6, Guide for Containing Debris Generated During Paint Removal Activities. The minimum containment requirements are:

- a. During Pressure Washing: Class 2W
- b. During Abrasive Blasting: Class 1A
- c. During Power Tool Cleaning: Class 3P

Ensure the plan includes, but is not limited to, removal method; methods for collecting debris; and containment enclosure components. Use fire retardant materials. Submit containment drawings, calculations, assumptions, ventilation criteria if applicable, and a structural analysis that verifies the existing structure can withstand the additional dead, live and wind loads imposed by the containment system, signed and sealed by a Specialty Engineer. However, for more complex structures incorporating cables stayed, suspension, or truss designs, the analysis must be performed by the Contractor's Engineer of Record qualified in Type Work Category 4.3, Complex Bridge Design. Submit a contingency plan addressing natural weather events such as tropical storms and hurricanes. Ensure the lighting inside the containment is in accordance with SSPC Guide 12, Guide for Illumination of Industrial Painting Projects. Provide lighting to a minimum intensity of 20 ft-cd for general, 50 ft-cd for work, and 200 ft-cd for inspection. All drawings and calculations must be submitted and accepted before any work begins. Include a clear description of the ventilation system components and information including the fan curve and design point on the proposed dust collector. Design to provide ventilation according to the notes provided in SSPC Guide 6: 100 feet per minute for cross draft and 50-60 feet per minute for downdraft.

Isolate the immediate area of the structure to ensure compliance with current and permit requirements for air, water, soil, and pollution prevention. Protect the containment system from vehicular and pedestrian traffic. Ensure paint, paint chips, or other debris will not fall outside of the containment area under any circumstances. Repair any damage created by fastening, bracing, or handling the scaffolding and staging. If a suspended platform is constructed, use rigid or flexible materials as needed to create an air and dust impenetrable enclosure. Verify that the platform and its components are designed and constructed to support at least four times its maximum intended load without failure, with wire cables capable of supporting at least six times their maximum intended load without failure. Strictly comply with all applicable OSHA regulations regarding scaffolding. The category and class of containment shall be as required in the Contract Documents.

561-10.4 Protection of Adjacent Areas: Protect all areas adjacent to abrasive blast cleaning, including machinery and deck grating. Before the commencement of any cleaning and coating operations, submit a control plan for the protection of adjacent surfaces from damage by nearby blasting and coating to the Engineer for review. Repair any damage to adjacent areas. The repair procedure must be submitted to the Engineer for acceptance prior to any remediation.

561-10.5 Worker Protection: Comply with the requirements of OSHA 29 CFR 1926 and applicable portions of 29 CFR 1910. Include specific programs as required by 29 CFR 1926.62 (lead), 29 CFR 1926.1118 (inorganic arsenic), 29 CFR 1926.1126 (hexavalent chromium), and 29 CFR 1926.1127 (cadmium) when these hazardous agents are present. Implement appropriate safety procedures for all hazards on the job site whether specifically

identified herein or not.

561-11 Waste Handling and Management.

561-11.1 General: Prepare a waste management program plan which addresses the applicable requirements from EPA regulations for hazardous waste management and the Contract Documents. Include provisions for the handling and disposal of non hazardous waste. Dispose of all waste in accordance with all federal, state, and local laws and regulations.

561-11.2 Collection and Handling of Waste: Properly classify, package, and store all paint removal debris, both solid and liquid in accordance with SSPC Guide 7, Guide for the Disposal of Lead-Contaminated Surface Preparation Debris, the Federal Water Pollution Control Act with amendments, and all other current government regulations and guidelines. Comply with the Resource Conservation and Recovery Act to include, at a minimum, CFR 40 260 through CFR 40 268. Prior to identification and storage, separate solid and liquid waste, and separate individual waste streams.

561-11.3 Testing and Analysis: Laboratory analyses for all waste stream and environmental samples shall be conducted by an EPA certified, independent laboratory with an approved Quality Assurance Plan. Laboratory analyses for worker monitoring and regulated area samples shall be conducted by an American Industrial Hygiene Association (AIHA) metals accredited laboratory. Submit all sampling and test reports no later than 72 hours after collection of samples.

561-11.4 Waste Identification: Collect samples in accordance with EPA SW 846, Test Methods for Evaluating Solid Waste - Physical/Chemical Methods. Use a random and representative sampling technique. Collect a minimum of four representative samples of each waste stream. These waste streams include, but are not limited to, water, paint chips, dust, and paint chips mixed with disposable abrasives and debris. Complete the initial sampling of each waste stream immediately upon filling the first drum, but do not allow waste to accumulate for longer than 7 days before sampling.

After the representative samples are collected, send them immediately to the EPA certified laboratory for analysis. Unless otherwise directed by the Engineer, required by State regulations, or required by the waste recycling or disposal facility, once each waste stream is sampled, tested, and classified, additional sampling and analysis are not required for subsequent shipments unless the waste stream changes. Submit samples to an approved laboratory to be tested for arsenic, barium, cadmium, hexavalent chromium, lead, mercury, selenium, and silver in accordance with EPA Method 3050 and Method 6010 (content) and EPA Method 1311, Toxicity Characteristics Leaching Procedures (TCLP). Clearly label each sample with sample number, date and time of sampling, name of collector, and location of collection.

Maintain chain of custody forms for each sample. Enter each sample on a sample analysis request form. Record sample numbers, type of waste, amount of each sample, distribution of samples, signature and all other information.

561-11.5 Waste Storage: Collect waste from the control devices, equipment, and all work surfaces on a daily basis. Keep hazardous and non-hazardous waste separate. Do not mix blasting debris with any other type of waste. Place waste in approved storage drums. Locate all hazardous waste within a regulated area. The maximum weight for each drum, when filled, is 821 pounds. Properly seal and label all drums. Transport waste storage drums to a secured, marked, temporary storage area. Locate the temporary storage area on well- drained ground not susceptible to flooding or storm water run-off. Place drums on a pallet and cover with fiber reinforced, impermeable tarpaulins. Store drums no more than two drums wide and two drums high. Arrange drums so that labels are easily readable. Do not store waste in the temporary storage area longer than 90 days.

561-11.6 Waste Disposal: Transport, treat and dispose of all hazardous and non-hazardous waste. Notify the Engineer a minimum of three weeks prior to the date of shipment of any waste to an off- site facility. Submit to the Engineer documentation that the receiving disposal facilities are properly licensed. Submit manifests for all hazardous and non-hazardous waste shipments. Identify any waste disposal subcontractors and submit verification of their licensing to perform waste disposal and transport operations.

561-11.7 Permits: The Contractor is responsible for all liability resulting from non-compliance with pertinent rules and regulations including permit requirements.

561-12 Method of Measurement.

When a lump sum pay item is provided, the quantity to be paid for coating existing structural steel will be the lump sum quantity for the areas shown in the Plans, completed and accepted.

When a square foot item is provided, the quantity to be paid for coating existing structural steel will be the plan quantity in square feet of surface area as shown in the Plans, completed and accepted.

561-13 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section.

Payment will be made under:

Item No. 561- 1- Coating Existing Structural Steel - lump sum.

Item No. 561- 2- Coating Existing Structural Steel - square foot.

SUPPLEMENTAL SPECIFICATIONS

UNOFFICIAL
DOCUMENT

710 PAINTED PAVEMENT MARKINGS.
(REV 5-26-17) (FA 8-7-17) (1-18)

SUBARTICLE 710-4.1.1 is deleted and the following substituted:

710-4.1.1 Painted Pavement Markings (Final Surface): On concrete surfaces or newly constructed asphalt without rumble striping, the painted pavement markings (final surface) will include one application of standard paint and one application of Class B retroreflective pavement markers applied to the final surface.

On newly constructed asphalt with rumble striping, apply two applications of standard paint and one application of Class B retroreflective pavement markers. Additionally, for center line rumble striping installations, install Class D retroreflective pavement markers with the first application of standard paint. Remove Class D markers prior to grinding, and install Class B retroreflective pavement markers in an unground area after grinding. The second application of standard paint must be applied within 24 hours of each day's grinding operation.

Do not apply final surface paint for bicycle arrows or bicycle messages, 24 inch longitudinal bars in special emphasis crosswalks, or route shields where preformed thermoplastic will be applied.

Install all retroreflective pavement markers in accordance with Design Standards, Index Nos. 17352 and 17345, prior to opening the road to traffic.

Temporary retroreflective pavement markers must meet the requirements of Section 102.

Permanent retroreflective pavement markers must meet the requirements of Section 706.

APPENDICES

UNOFFICIAL
DOCUMENT

TECHNICAL SPECIAL PROVISIONS.

The following Technical Special Provisions are individually signed and sealed but are included as part of this Specifications Package.

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CONCRETE SPALL REPAIRS.....	77
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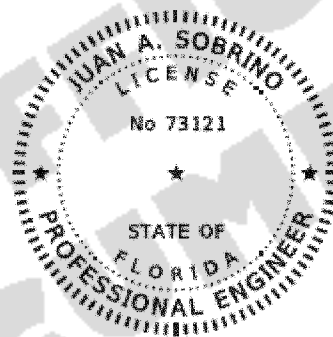
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TECHNICAL SPECIAL PROVISION

FOR

Carbon Fiber Repairs
SR A1A/MacArthur Causeway East Bridge Repairs
Bridge No. 870077

Financial Project No. 436522-1-52-01



Juan A
Sobrino

Digitally signed
by Juan A
Sobrino
Date:
2017.11.16
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The official record of this Technical Special Provision has been electronically signed and sealed using a Digital Signature as required by Rule 61G 15-23.004, F.A.C. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Professional Engineer:	<u>Juan A. Sobrino, P.E.</u>
Date:	<u>11/16/2017</u>
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Certificate of Authorization:	<u>27244</u>
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T1. SCOPE OF WORK

General: The scope of the work under this section includes the repair/restoration of the concrete superstructure and substructure components for MacArthur Causeway East Bridge Rehabilitation Project. The work shall include the preparation of concrete and reinforcing steel surfaces for concrete restoration with the application of external strengthening with Carbon Fiber Reinforced Polymer (CFRP) in accordance with these technical special provisions and contract drawings. Areas to be repaired are identified on the drawings. The Contractor shall provide sufficient materials and labor to perform the repairs. Any additional areas requiring repair, which are found during the course of the work, shall be brought to the attention of the Engineer. The Engineer will make a determination of the necessity for extended repairs.

General Repair Procedures are as follows:

1. Remove unsound concrete and/or repair structural cracks using a Pressure Injection Method. Concrete removal shall be confined to the areas identified in the drawings. In cases where it is necessary to extend beyond the identified areas prior approval shall be obtained from the engineer before proceeding with the concrete removal.
2. Sandblast or hydroblast and Clean reinforcement.
3. Treat exposed steel reinforcement by applying coating (corrosion inhibitor).
4. Restore section, according to specifications and drawings.
5. Prepare surface for CFRP application, according to specifications and drawings.
6. Apply CFRP sheets at required locations, according to specifications and drawings, including anchor system for the CFRP sheets.
7. Apply protective coatings, according to specifications.

The Contractor, according to specifications and drawings, shall provide concrete repair material, CFRP materials, conventional steel bars and top coatings. All work shall be performed according to the drawings and specifications following manufacturer's recommendations.

T2. PREQUALIFICATION OF BIDDERS

The Contractor, in addition to FDOT requirements, shall be a licensed General Contractor in the State of Florida and have successfully completed a minimum of five (5) projects of similar size and scope. In addition, Contractors shall be experienced with the installation of external strengthening via carbon fiber materials. Proof of experience shall be provided by a notarized certification letter from the Carbon Manufacturer attesting that the contractor is currently qualified to install the materials.

T3. CARBON WRAP MANUFACTURER/SUPPLIER QUALIFICATION

1. The Carbon System Manufacturer/Supplier must specialize in the manufacturing of the products specified in these Specifications with documented experience. The manufacturer shall have had in existence for a minimum of 5 years, a program for certifying Contractors for proper installation of the system.
2. The Manufacturer/Supplier must have a minimum of 25 documented successful field installations with a minimum of five years in business.

T4. MATERIALS AND TESTING

T4.1 General:

- A. The contractor shall submit the name of the independent laboratory to the Engineer for approval prior to conducting the tests. Test reports from testing conducted by an independent testing agency (meeting FDOT approval) can be used when available. The contractor shall be responsible for all testing costs.
- B. The Engineer shall observe all aspects of on-site field-testing.
- C. All tests shall comply with requirements of ASTM A370, ASTM C802, ASTM C1021, ASTM E329, ASTM E543, ASTM E548, ASTM E699, ACI 440.2R-01.
- D. Testing Equipment shall be calibrated before proceeding with each set of tests with devices of accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.

T4.2 Spall Repair Testing:

The bond strength between the existing concrete and the newly applied spall repair material, shall be verified by Direct pull-off testing conducted per ASTM C 1583. The location of the pull-off tests shall be representative of the general conditions of the repaired areas and shall be performed on a flat surface. The bond strength of the repair material to the existing concrete shall be a minimum of 200 psi. The frequency of tests shall be similar to that of the CFRP bond testing described under section T4.2 C. of this TSP. All tests are to be performed by the Contractor in the presence of the Engineer.

T4.2 CFRP Testing Requirements:

A. Inspection for voids/delaminations (General):

1. After allowing at least 24 hours for initial resin cure to occur, perform a visual and acoustic tap test, in accordance with ACI 440.2R-01 (Part 3, Chapter 6 (6.2.3)) of the layered surface. The acoustic tap test coverage will be, at a minimum, one sounding tool strike per square foot of area coated with the CFRP. Additional testing shall be performed if an area is deemed to be suspect.
2. Other methods for detecting voids must be submitted and approved by the

engineer prior to proceeding.

3. Voids requiring corrective action shall be marked and repaired in accordance with Section 1400-10 of this TSP.

B. Bond Testing:

All tests under this section are to be performed by the Contractor in the presence of the Engineer.

1. Direct pull-off testing shall be conducted per ASTM D 4541-89, or approved equal.
2. Direct pull-off tests shall be conducted under the following test conditions:
 - Prior to the first CFRP installation the Contractor shall conduct a pull-off test on an installed sample of the CRFP (12 x 12 inches) to verify the tensile bond between the CRFP and the existing concrete substrate. The location of the pull-off tests shall be representative of the general conditions and on a flat surface. The CFRP system shall be allowed to cure a minimum of 24 hours before execution of the direct pull-off test. Failure at the bond line at tensile stresses below 200 psi (1.4 MPa) is unacceptable. If the results are unacceptable the consult the manufacturer, make any necessary modifications and repeat the tests until acceptable results are obtained. The Engineer has the discretion to order the contractor to substitute a different carbon wrap system if the results from the repeated tests prove unacceptable.
 - During CFRP installation the Contractor will conduct pull-off tests to verify the tensile bond between the CFRP and the existing concrete substrate. Test location to be prescribed by the Engineer. The CFRP system shall be allowed to cure a minimum of 24 hours and a maximum of 48 hours before execution of the direct pull-off test. Failure at the bond line at tensile stresses below 200 psi is unacceptable. The Engineer has the discretion to order the contractor to remove the unacceptable materials and repeat the process.

C. Test Frequency:

1. Direct pull-off testing shall be conducted at the following frequency:
 - One initial CFRP pull-off test sample (12 x 12 inches) is required. The Engineer will select the location where this initial testing will be performed.
 - The installed CFRP shall be tested prior to the application of the protective coating. Perform a minimum of one direct pull-off test per beam of

installed CFRP. The CFRP system shall be allowed to cure a minimum of 24 hours (maximum 48 hours) before execution of the direct pull-off test. The Engineer will select the location where the testing will be performed.

Conditions Of Acceptance

All test data and corresponding locations shall be recorded and supplied to the Engineer. Promptly notify the Engineer of observed irregularities or non-conformance of work or products.

If re-testing is required because of non-conformance to specified requirements, the required repair as well as the new testing required by the Engineer shall be performed at no additional cost to the FDOT.

T4.3 Material Samples: If requested by the Engineer, a minimum of five samples will be taken for quality control testing of epoxy injection material, CFRP sheets, and conventional steel bars, bonding resins and topping products. Up to ten samples will be provided at no additional cost.

T4.4 Test Report:

After each test, promptly submit one copy of the test report to the Engineer.

Include with each daily report:

- i. Date issued.
- ii. Project title.
- iii. Name of inspector.
- iv. Date and time of inspection or testing.
- v. Identification of product and specifications section (including batch numbers).
- vi. Location of tests in the Project.
- vii. Type of inspection or test.
- viii. Results of tests.
- ix. Conformance with Contract Documents and Specifications.

T5. REPAIR OF EXISTING CRACKS

The work performed under this section Includes furnishing all materials, labor, tools and equipment for the repair of cracks with varying depths as designated by the Engineer.

T5.1 Mixing and Application of Crack Injection Epoxy:

Cracks with width less than 0.01 inch should be sealed using a high modulus gel epoxy. Cracks with width greater than 0.01 inch should be injected with a high modulus low viscosity epoxy. Typically, the crack is on different faces of the beam. Each face should

be injected independently.

A. Placement procedure:

1. Placement procedure should be in accordance with Section 411 of FDOT Specifications.
2. The epoxy resin adhesive for concrete repair, sealing the cracks, and porting devices: set-porting devices as required by the Manufacturer. Spacing of the porting devices shall be accomplished as required to achieve the travel of the epoxy resin adhesive for the pressure injection grouting between ports and fill the cracks to the maximum. On structures open on both sides, provide porting devices on opposite sides at staggered elevations. Apply the mixed epoxy resin adhesive for sealing over the cracks and around each porting device to provide adequate seal to prevent the escape of the epoxy resin adhesive for the injection grouting.
3. The epoxy resin adhesive for the pressure injection:
 - Manual: load the mixed epoxy resin adhesive for injection into a disposable caulking cartridge of a bulk-loading caulking gun. Inject the prepared cracks with a constant pressure in order to achieve maximum filling and penetration without the inclusion of air pockets or voids in the epoxy resin adhesive. Begin the pressure injection at the lowest port and continue until there is the appearance of the epoxy resin adhesive at an adjacent port, thus indicating travel. Continue the procedure until all pressure injectable cracks have been filled.
 - Automated: dispense the epoxy resin adhesive for injection under constant pressure in accordance with procedures recommended by the equipment Manufacturer or as required to achieve maximum filling and penetration of the prepared cracks without the inclusion of air pockets or voids in the epoxy resin adhesive. The pressure injection of single or multiple ports, by the use of a manifold system, is possible. This decision should be made by the Contractor, based upon his experience, with the approval of the Engineer. Continue the approved procedure until all pressure injectable cracks have been filled.
4. If penetration of any cracks is impossible, consult the Engineer before discontinuing the injection procedure. If modification of the proposed procedure is required to fill the cracks, submit said modification in writing to the Engineer for acceptance prior to proceeding.
5. Adhere to all limitation and cautions for the epoxy resin adhesives in the Manufacturers current printed literature.
6. At the Engineer direction the contractor may be required to obtain a core to evaluate the epoxy penetration and epoxy injection quality.

T5.2 Mixing and Application of Crack Injection Epoxy:

Only products specified in the FDOT Qualified Products List (QPL) shall be used for the pressure injection, sealing of cracks. A list of material along with manufacturer specifications shall be submitted and approved by the Engineer prior to proceeding with the crack repair.

T5.3 Delivery, Storage, and Handling:

- A. Deliver the specified product in original, unopened containers with the Manufacturer's name, labels, product identification, and batch numbers.
- B. Store and condition the specified product as recommended by the Manufacturer.

T5.4 Job Conditions:

Do not apply material if the concrete is wet, if it is raining or if the rain appears to be imminent.

T5.5 Cleaning:

- A. After the epoxy resin adhesive for grouting has cured, the epoxy resin adhesive for sealing cracks and porting devices shall be removed. Clean the substrate in a manner to produce a finished appearance acceptable to the Engineer.
- B. Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.

T6. RESTORATION OF PRESTRESSED BEAM AND CONCRETE DECK USING CFRP

Inspect surfaces to identify existing conditions with dimensions of spalls, conditions and number of strands exposed, cracks, etc. Provide this information to the Engineer for review and issuance of work orders and type of repairs to be performed (the type of repair to be performed would only be changed from the listed repair in the plans if the site was different or was not identified in the plans). The Engineer shall issue the work order or provide his comments within five (5) working days from the contractor submittal.

T6.1 Quality Assurance:

- A. The Contractor shall inspect all materials prior to application to assure that they meet specifications and have arrived to the job-site undamaged.
- B. The CFRP Reinforcement shall be completely inspected by the Contractor during and immediately following application of the composite materials. Conformance with the design drawings, proper alignment of fibers and quality workmanship shall be assured. Entrapped air shall be released or rolled out before the epoxy sets.

- C. After CFRP Reinforcement has cured, the Contractor shall inspect all the work to check for voids and/or debonding. Repairs shall be made, and noted in the Daily Construction Log.

T6.2 Submittals:

- A. Submit three copies of product data indicating product standards, physical and chemical characteristics, technical specifications, limitations, installation instructions, maintenance instructions and general recommendations regarding each material. Proposed material and method of application including manufacture's technical specifications and formulation if applicable shall be submitted to the Engineer for approval prior to commencing work.
- B. Submit for record a qualification statement by the contractor listing their completed FRP Reinforcement projects similar in size and scope, including: location, owner, engineer/architect, and contact numbers. Include a notarized certified letter from the CFRP manufacturer stating that the contractor is currently qualified to install the Manufacturer's CFRP.
- C. Submit Health and Safety Sheets and Material Safety Data Sheets (MSDS) of each product used on site and certification that the materials conform to local, state, and federal environmental and worker's safety laws and regulations.
- D. Sample mock-up (minimum 12 x 12 inches) of the coating product to be inspected for color matching and approved by the Engineer.
- E. The contractor shall prepare and submit for approval three sets of the QA plan including:

The shop drawings and the work plan for the installation of the CFRP. The shop drawings and work plan shall contain all of the details of the CFRP wrap, surface preparation, crack and concrete repair materials, details for the anchor system at the end of the U-wraps, joint and end details, lap details and all other information required for the proper installation of the system.

The work plan will describe the testing and inspection requirements and testing equipment to be used.

T6.3 Job – Site Conditions:

- A. Do not apply CFRP Reinforcement materials if raining, or dew condensation is expected, or existing concrete surface is wet or if the ambient or surface temperature are below 45 degrees F or above 95 degrees F.
- B. The ambient temperature and temperature of the epoxy components shall be between 50 degrees F and 90 degrees F at the time of mixing.

T6.4 Deliveries, Storage, and Handling:

- A. Deliver primer, saturant, and protective coating in original, unopened containers with the Manufacturers name, labels, product identification, and batch numbers.
- B. CFRP Reinforcement fabric must be stored in accordance with the Manufacturers recommendations.
- C. Store primer, saturant, and protective coating under conditions as recommended by the Manufacturer. Products that are not properly stored or have exceeded their shelf life shall not be used.
- D. The Contractor shall properly dispose of empty containers immediately.

T7. PRODUCTS**A. Concrete Patching Material:**

The material to be used as patching material shall be a Form and Pump latex modified concrete listed on the Departments APL, as one-component cementitious pump and pour mortar. The manufacture shall be consulted as to the type, size and quantity of aggregate to be used in the concrete mix. All aggregate shall be from an approved source.

Minimum Properties of Cementitious Pump and Pour Mortar:

- Application Time: 30 minutes
- Color: concrete gray
- Compressive Properties (ASTM C-109) at 28 days: 6,000 psi min.
- Tensile Properties (ASTM C-499) at 28 days: 500 psi min.
- Flexural Properties (ASTM C-348) at 28 days: 720 psi min.
- Bond Strength (ASTM C-882 Modified) 28 days: Bond strength: 2,200-psi min.

B. Bonding and Reinforcement Protection Agent:

For corrosion protection and bonding of new concrete to existing concrete, use a bonding and reinforcement protection agent listed on the Department's APL.

C. Unidirectional Carbon FIBER

The Carbon Fiber system shall have these minimum material properties:

Dry Carbon Fibers properties

Property	Minimum Requirement
Ultimate tensile strength	> 500,000 psi

Tensile modulus	$>35 \times 10^6$ psi
Elongation	$> 1.5 \%$
Density	0.065 lb/inch^3
Weight per square yard	9 Oz.
Primary fiber direction	0 (unidirectional)

Cured laminate properties

Property	Minimum Requirement
Tensile strength	139,000 psi
Modulus of elasticity	10.6×10^6
Elongation at break	1.33 %
Thickness	0.040 inch.
Strength per inch width	5.56 Lbs/layer

D. Surface Primer

Surface Primer shall be a 2 component, 100% solids, moisture tolerant, high modulus, high strength epoxy.

Surface Primer shall meet the following minimum requirements:

Property	Requirement	ASTM Test
Tensile Strength, 7 Day	3,600 psi	D638
Tensile Modulus, 7 Day	6.5×10^5 psi	D638
Elongation at Break, 7 day	1 %	D638
Shear Strength, 14 Day	3,600 psi	D732
Flexural Strength, 14 Day	6,800 psi	D790
Heat Deflection Temp. (HDT)	118 F	D648

E. Saturant

Saturant resin shall be two component, 100% solids, moisture tolerant, high strength, and high modulus epoxy.

Saturant shall meet the following minimum requirements:

Property	Requirement	ASTM Test
Tensile Strength	10,500 psi	D638
Tensile Modulus	459 psi	D638
Elongation at Break	4.8 %	D638
Flexural Strength	17,900 psi	D732
Flexural Modulus	452 ksi	D790
Heat Deflection Temp. (HDT)	170 F	D648

F. Protective Coating

A protective coating shall be applied onto the FRP surface for aesthetics appeal and protection against ultra violet and environmental exposure. The protective coating shall be non-vapor-barrier, flexible, and waterproofing. Material shall be compatible with the FRP system. They may be a polymer-modified Portland cement coating or a polymer-based latex coating. The mortar finish shall be made with silicate sand of 1/64 to 1/8 inch size, and shall be spread over the FRP system before the resin hardens. The minimum required dry film thickness is six (6) mils. Two uniform coats are the minimum required.

Final appearance is to match, within reason, the color and texture of the adjacent concrete. Surface preparation shall be in accordance to the manufacturer's specifications. Any necessary cleaning of the FRP surface shall be done without using solvent-wipes, unless approved by the manufacturer of the FRP system. If abrasive cleaning is necessary, air pressure shall be limited to avoid any damage to fibers. Do not apply the coating when surface moisture is present or when rainfall or condensation is anticipated.

Prior to application, the contractor shall submit, for approval, the product specifications along with a representative mock-up of the final product. The mock-up shall be no smaller than 12 x 12 inches.

Surface Preparation

All surfaces to be coated must be clean and dry. An open textured sandpaper sandpaper-like surface as per CSP-3 is required. On the plain concrete that is to be coated surfaces should be prepared mechanically by appropriate approved surface preparation techniques following manufacturer's recommendations. Contractor is to include the preparation technique as part of the detailed work plan submitted to the Engineer for approval prior to starting the work.

Material can be applied by brush, roller, or spray over entire area moving in one direction. Allow a minimum of 90 minutes prior to recoating. At higher temperatures, work carefully to maintain a wet edge.

Typical Properties of the mixed polymer based latex coating.

1. Pot Life: indefinite
2. Color: gray

Typical Properties of the cured polymer based latex coating (gray):

1. Solids Content: 60% by weight 46% by volume
2. Water Vapor diffusion (at 5 mils = 120 microns dry film thickness)
 μ - Value H_2O (diffusion coefficient) = 3,140

SdH_2O (equivalent air thickness) = 1.3 ft.

3. Carbon Dioxide Diffusion (at 5 mils = 120 microns dry film thickness)

μ - Value CO_2 (diffusion coefficient) = 1,100,000

$SdCO_2$ (equivalent air thickness) = 433 ft.

Equivalent concrete thickness (Sc) = approx. 13 inches

4. Weathering (ASTM G-26)

2000 hours Excellent, no chalking or cracking.

T8. CONCRETE SECTION PREPARATION

The work under this article consists of restoring spalled and/or delaminated concrete using a polymer/latex modified concrete. Surfaces where the CFRP system is to be applied must be sound. Concrete spalls and delaminations must be repaired according to the following procedure:

- A. Concrete restoration shall include the removal of all delaminated concrete from the area to be restored to a minimum depth of 1 inch behind the reinforcement and shall follow all specifications in TSP for Concrete Spall Repairs.
- B. The limits of concrete removal for each beam are identified in the plans. No concrete removal beyond the identified areas shall be performed without consultation and approval of the Engineer. The Engineer shall issue the work order or provide his comments within three (3) working days from the contractor submittal requesting removal of additional concrete.
- C. Cracks within solid concrete greater than 0.25mm (0.010 inch) must be stabilized using epoxy injection methods defined in section T5. Surface depressions shall be filled and cured in advance with epoxy filler per Manufacturer's instructions.
- D. Voids with diameters larger than ½ inch. and depressions on the concrete surface deeper than 1/16 inch. measured from a 12-inch. straight edge placed on the surface, shall be filled with approved polymer mortar (refer to specifications in TSP for concrete repair).
- E. The restored concrete surface shall be smooth, uniform and shall match the concrete component original profile. Remove form lines, sharp edges greater than ¼ inch by grinding or filling with putty. Ridges greater than ¼ inch may need to be ground down as per the Engineer's inspection. Sharp corners shall be rounded to a radius of greater than ½ inch prior to the application of carbon fibers. Filler material, where required, shall be an epoxy.
- F. Prior to applying the carbon wrap system, the substrate concrete and finished surface of concrete shall be cleaned to the approval of the Engineer. Cleaning shall remove any dust, laitance, grease, oil, curing compounds, wax, impregnations, stains, paint coatings, surface lubricants, foreign particles, weathered layers or any other bond-inhibiting material. If power wash is used, the surface shall be allowed to dry thoroughly before installing the FRP system. The cleaned surface shall be protected against re-deposit of any bond-inhibiting materials.

- G. The concrete shall be allowed to cure for a minimum of 7 days prior to application of the carbon wrap system, unless its curing and strength are verified by tests. Final approval of the surface must be received by the Engineer prior to proceeding with the work.

T9. MIXXING PRIMER AND SATURANT

- A. Mix components in accordance with Manufacturer's recommendations.
- B. Viscosity may be adjusted by means of heating. Diluting is not permitted. Pre-condition materials when circumstances dictate as specified herein.
- C. Mix only that quantity which can be used within its pot life.

T10. PRIMER APPLICATION

- A. Apply primer in accordance with Manufacturer's recommendations.
- B. Primer may be applied with a brush or roller. Apply second coat as necessary after first coat has penetrated into concrete.
- C. Follow Manufacturer's recommendations pertaining to time between priming and application of FRP Reinforcement.
- D. Primer must be covered with fiber within 24 hours of application. If 24-hour window is exceeded due to unforeseen circumstances, the primed surfaces must be solvent wiped with a fast flashing solvent or roughened with sandpaper to break the amine blush.
- E. Surface irregularities caused by the primer application shall be ground and removed by disc sanding.

T11. CFRP REINFORCEMENT APPLICATION (DRY LAY-UP METHOD)

- A. Apply CFRP Reinforcement in accordance with design plans. Follow Manufacturer's recommendations regarding system installation.
- B. FRP Reinforcement sheets shall be cut beforehand into prescribed lengths. Sheets shall be lapped in the longitudinal direction 4 inches or as indicated on the Drawings. Note: No lapping is required of the sheets parallel to the direction of fiber orientation.
- C. To ensure complete bond between layers, any successive layer of fabric shall be placed before the onset of complete gelation of the previous layer of epoxy.
- D. The cured composite shall have uniform thickness and density, bond between layers and lack of porosity. Undulations in the completed wrap surface shall not exceed ¼ inch per foot in any direction.
- E. Fibers of the fabric shall not deviate from a horizontal or a vertical line by more than ½ inch per foot.
- F. Protect finished installation of CFRP Reinforcement from rain, sand, dust, salt spray and any

contaminants using protective sheeting or other barriers. Do not allow protective sheeting to come in contact with finished application.

- G. Curing of finished application shall be a minimum of 24 hours prior to application of protective coating.

T12. REPAIR OF DEFECTS

- A. Upon completion of the curing process, the installed system shall be checked for areas where saturant has not penetrated or completely cured. Such areas shall be epoxy injected to reestablish bond subject to the approval of the Engineer (see C, D and E for size limitation and repair procedures).
- B. Repair procedures shall be performed in accordance with Manufacturer's recommendations and as specified by the Engineer. All repairs shall be subject to the same application, curing, and quality control specifications as the original work.
- C. Small delaminations less than 2 sq. inch. each (1300 sq. mm) does not require corrective action, as long as the total delaminated area is less than 5% of the applied surface area per each face of the beam. No more than two such delaminations on each face of the beam will be allowed.
- D. Large delaminations, greater than 25 sq. inch. (1600 sq. mm) shall be repaired by selectively cutting away the affected sheet, reapplying primer and resin layers, and applying an overlapping CFRP patch of equivalent plies and fiber orientation. Allow for 6 inches overlap in all directions.
- E. Moderate delaminations less than 25 sq. inch. (1600 sq. mm) may be repaired by filling the delaminations by low-pressure injection of the saturant or by the previous procedure specified for large delaminations.
- F. Repair procedures for conditions that are not specifically addressed in this specification shall be submitted and approved by the Engineer prior to proceeding with the work.

T13. INSPECTION, TESTING, AND SAMPLING

A. Testing

For Testing Requirements see Section 1200

B. Sampling

1. Record lot number of fiber used for wrapping. Six samples shall be prepared randomly throughout the duration of the project. The Engineer shall select the time and location of these samples. Samples shall consist of two 12 inch by 12 inch (30 cm x 30 cm) layers of fiber (flat).
2. Mix samples of epoxy resin according to Manufacturer's recommendations. All materials used for the samples shall be from the same products (lot number) being used at the site on a daily basis. On a smooth, flat, level surface covered with sheet

polyethylene, prepare sample by placing two layers of the composite oriented in the same direction. Cover with sheet polyethylene, squeegee out all bubbles. The prepared, identified samples shall be tested. All testing shall be at the contractor's expense, by an independent qualified laboratory, in accordance with ASTM D3039. Two copies of the test results are to be submitted to the Engineer within five days of testing. As a minimum the testing shall consist of the following:

- Ultimate tensile strength.
- Tensile modulus.
- Percent Elongation.

T14. BASIS OF PAYMENT

This work will be paid under the Pay Item 450-82 Beam Repair. Payment shall constitute full compensation for all materials, labor, tools, equipment, specified testing and incidentals necessary to complete the work.

END OF SECTION

TECHNICAL SPECIAL PROVISION

FOR

Cathodic Protection
SR A1A/MacArthur Causeway East Bridge Repairs
Bridge No. 870077

Financial Project No. 436522-1-52-01

The official record of this Technical Special Provision has been electronically signed and sealed using a Digital Signature as required by Rule 61G 15-23.004, F.A.C. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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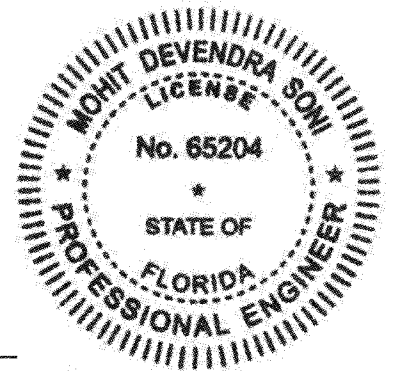
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TECHNICAL SPECIAL PROVISIONS

For CATHODIC PROTECTION

T1. SCOPE OF WORK

General: The work under this Section includes the installation of three different galvanic cathodic protection (CP) systems. The first cathodic protection system consists of the application of an arc-sprayed zinc (anode) over areas of structural elements to be protected. This system is to be applied to areas above the tidal zone. This application shall be performed by thermal spraying (metalizing) the concrete with the required surface preparation necessary to produce a minimum bond of 100 psi between the zinc and the concrete. The second system consists of integral pile jackets with sacrificial cathodic protection complemented with submerged bulk zinc anodes that will be installed on designated piles after performing all necessary repairs. This work includes underwater repairs. The third system consists of the installation of submerged pier bulk zinc anode assemblies attached to the sides of partially submerged footers, columns and pier walls. This system provides a level of protection to reinforcing steel at elevations below the tidal zone.

Specialty Work Services: The Contractor shall secure the services of a NACE certified Cathodic Protection (CP) Specialist(s) to provide quality assurance of every phase of the application of the thermally sprayed zinc, the installation of the pile jackets cathodic protection and submerged bulk anode assemblies, installation of bulk zinc anodes in the pile caps, the continuity testing and connections of rebars, and any other function further specified for each system. Different Specialists may be used for each system.

T2. PREQUALIFICATION OF BIDDERS

Metalizing Spray Technician Qualifications: The Thermal Spray Technician must have a minimum of three years of experience in the operation of Thermal Spray Equipment. The technician must provide written documentation of prior experience using a wire metalizing arc unit on at least two projects of similar scope, including locations, contact names, and phone numbers of Owners of previous projects for verification.

Metalizing Contractor and Subcontractor Qualifications: The metalizing Contractor and Subcontractor conducting the installation of the metalized coating must be engaged in thermal spray operations and shall have a minimum of one year of previous experience in metalizing operations in concrete. Provide written documentation of locations, contact names, and phone numbers of Owners of previous projects for verification.

T3. CATHODIC PROTECTION SPECIALIST QUALIFICATIONS

The NACE certified Cathodic Protection (CP) Specialist requires a minimum of two years of experience in the application of sprayed zinc on concrete and a minimum of five years of experience in the field of corrosion control on concrete structures and installation of pile

jackets with sacrificial cathodic protection. As an alternative, the Specialist may be a Licensed Professional Engineer with similar requirements as for the NACE certified Specialist, or a corrosion practitioner with five years of technical experience and knowledge in the field of corrosion control on marine concrete structures. The CP Specialist, the Licensed Professional Engineer and the corrosion practitioner requirements shall include a submittal to the Engineer of Record of written documentation, specifying project names, locations and phone numbers of owners of previous projects with sacrificial cathodic protection system.

The C.P. Specialist shall be an independent firm or individual not associated with the Contractor, a project subcontractor, any of the anode manufacturers, or the anode distributors.

T4. MATERIALS AND TESTING

T4.1 Manufacturer certified test reports for specific materials are required. Notify the Engineer that they are performing the quality control testing (as specified in this TSP). Use certified materials or materials from a Department approved source when applicable. Upon completion of all work, furnish the Department with a notarized certification on their letterhead that reads as follows:

"We do hereby certify that the materials and work incorporated into any and all elements of this Technical Special Provision meet FDOT Specifications and Plans thereto".

T4.2 Bulk Zinc Anode: The anode shall be essentially pure zinc meeting Specification ASTM B-418 with an approximate weight of 50 lbs.

T4.3 Metalizing Wire: The metalizing material shall be essentially pure zinc (99.9% pure) produced in wire form of 1/8 inch standard size which can be molten and sprayed with the equipment described in sub-article 5.2 of this Technical Special Provision. The zinc wire shall be available on a commercial basis and shall meet all the requirements of ASTM B-833.

T4.4 Material Submittals: In addition, submit for approval the following:

Work Plan and Work Schedule: Submit a detailed work plan and schedule for the types of work as stated in the Plans and the Technical Special Provision for review and approval by the Engineer prior to beginning any work.

Manufacturer's Certification: Provide manufacturer's certifications of test reports for the following:

- 1) Metalizing zinc anode wire shall indicate chemical composition, wire diameter, lot number, manufacturing date and relative manufacturing data where applicable.
- 2) Cathodic protection submerged bulk anodes; shall include metal composition and dimensions, manufacturing date and relative manufacturing and technical data where applicable.
- 3) Certificate of calibration for testing equipment.
- 4) Blasting material data sheet and MSDS.
- 5) Zinc silicate-metalizing overcoat.
- 6) Jacket Forms (as per Section 457)
- 7) Jacket mesh anode.

Technical Specifications: Provide technical data sheets for the following:

- 1) Metalizing equipment.
- 2) QC/QA testing equipment;
- 3) Electrical wire, PVC accessories, connectors, and splice insulating material;
- 4) Concrete Removal Tools;

FDOT Approved Design Mixes:

- 1) Design mix for Class IV Concrete for pile jackets (FDOT Specifications Section 457).

Shop Drawings:

- 1) Cathodic Protection Integral Pile Jacket:

- Method for cleaning concrete above and below water.
- Forms system type including supports, method for concrete placement, and method of installing and removing the forms.
- Location of standoff spacers, method of fastening the jacket form to the piling, method for sealing the form after its installation, details of shape at the bottom seal region, and method for bracing during placement of filler.
- Details of access holes, fiberglass caps and methods for placing the filler and capping the pumping ports.
- Bulk anode assembly

All calculations shall be signed and sealed by an engineer registered in the State of Florida.

T4.5 Concrete Materials Testing: For concrete material testing, refer to Section 346 of the Standard Specifications.

The QC Plan for concrete, design mixes and general work plan for the specific tasks shall be approved prior to commencing the specific work for that mix. Failure to obtain approval of any of the above shall not be grounds for granting additional contract time.

T4.6 Concrete Sounding Test: Locate and inspect all the deteriorated areas indicated in Plans and/or as directed by the Engineer. Sound tests all concrete surfaces to determine the actual dimensions of the areas of concrete to be repaired and metalized. Record the locations, dimensions and areas of cracks and spalls verify by the Engineer prior to beginning work. Submit a written report identifying the areas to be repaired for approval before the authorization to work is issued. Include a report of the spalled areas with the CP Specialist report (T6).

T4.7 Additional Testing: Repair or replace any damaged private or public property resulting during construction and any testing required assigning responsibility of damage. Other testing may be required as further described in this Technical Special Provision.

T4.8 Submittals: In addition to the material certifications, submit for approval as a requirement under this Technical Special Provision:

- 1) Cathodic Protection Specialist(s) certification
- 2) Cathodic Protection Specialist QC/QA Plan
- 3) Metalizing spray technician qualifications

- 4) Metalizing Contractor/subcontractor qualifications
- 5) Rebound and concrete containment system(s), and waste disposal methods

T5. ARC-SPRAYED ZINC CATHODIC PROTECTION

T5.1 General: This system requires the application of sprayed zinc (anode) to selected damaged areas that exhibit severe corrosion problems after concrete restoration has been completed. The application shall be performed by thermal spraying (metalizing) the concrete with the required surface preparation necessary to produce a good bond between the zinc and the concrete. A good bond is essential to provide an efficient system.

The Contractor shall furnish labor, materials, testing and installation equipment, and shall apply zinc anodes on all surfaces within the cathodic protection zones defined in the contract plans or as directed by the Engineer.

For this work, the Cathodic Protection Specialist shall provide quality assurance and as a minimum shall provide the following services:

- Responsible for inspection and testing of test patches to determine the target bond strength of the sprayed zinc.
- Overseeing the quality of all phases of work related to the metalizing operation.
- Review and randomly verify electrical continuity test results and provide a written report to the Engineer.
- Review all contractor documents related to the cathodic protection work prior to submittal to FDOT for approval.
- Training Contractor's and FDOT personnel in performing the required quality control (QC) testing for cathodic protection.
- Conduct random QA testing on a minimum of 50% of the components metalized during his/her (C.P. Specialist's) absence. These random tests shall be in addition to the Contractor's QC tests specified in this Technical Special Provision. Random testing shall be conducted at a minimum frequency of once per month and satisfactory approval shall be required for partial payments of the metalizing work.
- Conduct all other specified testing to meet the requirements of the contract documents.
- Visit the project on a monthly basis (minimum) to perform random QA testing and directly update the Engineer (verbally and in writing) regarding quality of the work in progress.
- Provide final report.

CP Specialist QC/QA Plan: Provide a Quality Control Plan certified by the CP Specialist and approved by the Contractor for FDOT approval. Such plan shall include method and frequency of Contractor's QC testing, continuity testing by the CP Specialist, zinc anode application, time dedicated for training, frequency of random QA testing, method of updating the Engineer, and method(s) for initial activation of the cathodic protection systems. The C.P. Specialist shall also provide a final report to the Engineer describing the general characteristics of the metalizing work, the thickness and bond strength results for each metalized component. The report and all collected data shall be in typed form and a digital version of the report must be provided along with four bound hard copies. The Quality Control Plan and C.P. Specialist qualifications shall be submitted to the Engineer for approval prior to commencing any of the concrete removal or cathodic protection work.

Surface Preparation Execution: Blasting for preparation of the surfaces to receive metalizing shall be performed by the metalizing group in charge of the metalizing application and achieving the

established target bond. Different levels of blasting and/or abrasive media may be necessary to achieve the target bond for different types of concrete and to 100% remove existing metalizing.

Staging of Work: The work shall be performed from the water using a barge or a suitable boat(s). During work hours, the vessels can be tied to the piers as long as rubber bumpers or other devices are provided to protect the pier from damage. Therefore, location of equipment on the roadway or on the bridge will not be permitted unless otherwise approved by the Engineer for specific operations. The boat/barge shall be removed from bridge at night, unless work is in progress. Scaffolding may be used as approved by the Engineer as long as no permanent attachments or modifications to the structure are made.

Some spalls may be located at high elevations that will require a high access scaffolding system for repairs. The Contractor shall also be responsible for removing all anchors and patching all holes created to support forms, false work, etc. with an appropriate approved mortar or epoxy.

Work Vessels: The Contractor shall use a proper size vessel (barges) taking into consideration site conditions, open rough seas, strong currents, and winds at the site. The Department will not allow additional time for work delays due to rough waters if it determines that the chosen equipment was not adequate for the existing conditions at the site.

A gasoline or diesel fuel powered emergency boat with communication equipment (phone or radio) shall be at the job site at all times when work is being performed. At no time shall any worker be present at the job site without immediate transportation to shore in the event of an emergency. The emergency boat shall be in addition to the boat provided for FDOT inspectors and shall not be used as a work platform.

Key Personnel: The Contractor shall maintain his/her own skilled personnel on the job site at all times. The Contractor shall be responsible for the proper installation of the Cathodic Protection Systems and the proper maintenance of the installation equipment.

T5.2 Metalizing Equipment: Prior to commencing work, the Contractor shall submit a list of the equipment intended to be used for the arc-sprayed zinc applications. No metalizing shall be performed prior to equipment approval by the Department. The Contractor shall require a representative of the zinc spray equipment manufacturer to observe the application of the Zinc Spray and determine whether the equipment is being operated properly. Zinc application equipment must meet the following minimum requirements:

T5.2.1 Metalizing Unit: The metalizing unit shall be a portable, electric arc spray unit capable of spraying zinc wire of 1/8" diameter and should meet the following minimum requirements.

- a. The application gun shall be provided with a self-contained electric arc.
- b. Spray pattern shall be elliptical in shape and have provisions for adjustments to circular pattern.
- c. The application gun shall be capable of operating remotely from the wire feed unit at a distance of no less than 10 feet.
- d. The wire feed unit must have moisture/oil separators provided within the unit itself (in addition to the separators already in the line) and shall be enclosed as to protect the anode wire from the environment.
- e. The wire feed method shall be dual drive wheel, push type system only. Other wire feed systems may only be given temporary approval based on performance.

- f. The system shall be capable of operation at 500 amps continuous duty cycle.
- g. The system shall be able to operate remotely from the power supply unit for a minimum distance of 50 feet.
- h. The wire feed unit and thermal spray gun assembly shall be reasonably portable and capable of operating from a reach-all, scaffolding, boat, or a small barge.

T5.2.2 DC Power Supply Unit: The power supply unit shall be a gasoline or diesel engine driven, direct current power source with a minimum NEMA output rating of 600 amps at 40 volts operating at 80 percent duty cycle. The unit shall have a built-in auxiliary 60-hertz (Hz) alternating current power unit capable of delivering 115/230 volts and a minimum of 50 amps.

Alternate power supplies may be approved based on satisfactory recommendation of the metalizing unit manufacturer.

The power supply shall be capable of operation at constant current or constant voltage modes with fully adjustable output over the entire voltage and current range and shall be capable of connection to the metalizing unit at a minimum distance of 50 feet. An ammeter, voltmeter, and oil pressure and engine temperature gauges shall be mounted in the Control Panel of the unit. The gauges shall be maintained clean and readable at all times during the metalizing operation.

T5.2.3 Air Supply Equipment: The air supply unit shall be capable of delivering a minimum of 250 CFM of air at 100 pounds of pressure and having an adjustable pressure range of 50 to 125 pounds per square inch (psi). The air compressor shall be provided with a minimum of 50 feet of 1 1/4 inch high-pressure air hose with standard couplers and produce moisture free air at the blast nozzle. When used in conjunction with the metalizing unit and an operator temperature control unit, the system shall be capable of maintaining a minimum air volume of 175 CFM at 90 pounds of pressure at the gun head.

The air compressor shall be provided with moisture/oil separators mounted within the unit and additional separators or filters as necessary to produce moisture free air. Separators and filters shall be serviced at a minimum of once per day to provide moisture free air.

The air supply unit (engine and compressor) shall be mounted on a rugged frame enclosure provided with lift-off service side panels to provide restricted safe access to serviceable components.

T5.2.4 Abrasive Blast Equipment: The blasting equipment shall be a conventional force fed pressure type stationary sandblaster. The nozzle size shall be such that a minimum of 80 psi is maintained at the blast nozzle. The sandblasting unit shall be securely mounted on the barge (or boat) for the duration of the project. The sandblasting equipment shall be capable of operating at a minimum of 50 feet away from the pot and shall be provided with an electrical abrasive cut-off switch. The unit shall be equipped with a minimum 1 1/4 inch piping and valves to provide a sufficient air-sand volume. Blast hoses shall be provided in 25 to 50 foot sections. The inside diameter of the hose shall be 1 1/4 inch and the ends shall be provided with appropriate couplers. The blast hose shall be capable of withstanding a working pressure of 175 psi.

T5.3 Surface Preparation for Sprayed Zinc Cathodic Protection:

Concrete Removal: All concrete removal shall be made as shown on the plans and the Technical Special Provisions for Concrete Spall Repairs.

Blasting: All concrete surfaces to be metalized shall be thoroughly blasted with silica sand or other suitable material to remove all existing coatings, cement splatter or foreign materials prior to

zinc application. Sandblasting of the concrete should leave a clean, rough surface, which leaves the appearance of medium grit sandpaper without exposing the coarse aggregate.

The abrasive stream should be directed against the work surface at an angle of approximately 15 degrees from the plane and not in excess of 30 degrees unless necessary to reach specific areas. Level of sandblasting of the concrete surface to achieve the highest possible bond of the zinc shall be determined in the field for every type of concrete present to receive metalizing. Blast material must be plant packaged and maintained in a clean and dry condition at all times. Material stored in the sand-blaster pot overnight shall not be used.

Although not anticipated, any steel component requiring metalizing shall receive an abrasive blast to the extent that a near white appearance is obtained as per NACE 2 as referenced in NACE12/AWS C2.23/SSPC- 23 Standard.

Electrical Continuity: The Contractor shall provide written details of the procedure for continuity testing for approval by the Cathodic Protection Specialist. After a written approval by the Cathodic Protection Specialist, such procedure shall be included in the Cathodic Protection Specialist QC/QA Plan for approval by the Engineer. Electrical continuity of the reinforcing steel shall be tested and corrected by the Contractor for every piece of reinforcement within the metalizing limits and supervised by the Cathodic Protection Specialist. Although part of the cathodic protection work, continuity shall be provided during the concrete restoration operation. Care shall be observed as not to damage any rebar connecting rods or wires for connection plates, which may have been installed during the concrete restoration work.

Connection for Connection Plates: The Contractor shall have the option to install the connections for the connecting plates during the concrete removal/restoration operation or the surface preparation for metalizing work. However, the surface of the concrete to be in contact with the connection plates shall be sufficiently smooth and uniform as to provide 100% contact between the plates and the concrete. The number of connection plates and method of installation are shown in the Plans. No concrete removal shall be performed without the Engineer's approval and no metalizing shall be performed until concrete removal/restoration and surface preparation have been approved by the Engineer. The Department shall be allowed to stop work due to poor workmanship, unapproved materials or unapproved work procedure at any time without consequence to the Department.

T5.4 Arc-Sprayed Zinc Anode Application

Test Sections-Target Bond: Prior to commencing the arc-spraying operation, the Contractor shall metalize a minimum of four on-site test sections with minimum dimensions of four square feet each. These test sections shall be used to determine the field application rate for the specified thickness and the grain size, texture acceptability and target adhesion strength. The test sections shall be representative of all of the concrete conditions present on the bridge to receive metalizing. Bond strength on the test sections shall be measured at no less than 3 hours and no more than 24 hours after metalizing and shall be conducted as described by ASTM D4541. All bond tests shall be made in triplicate and the results averaged.

Preliminary test areas and adhesion tests shall be performed on the bridge prior to commencing production metalizing. Adhesion strength shall be measured on all test sections to determine the target bond for production and acceptance. Target bond shall be established based on the higher strengths obtained from the test areas. It is expected that a minimum of 100 psi of bond strength will be achieved and strengths lower than the expected will not be accepted. Various levels of sandblasting of the test sections' concrete may be necessary to determine the proper surface

condition to achieve the target bond. The Contractor shall provide a minimum of 14 days advanced notice for the preparation and metalizing of the test sections such that the Cathodic Protection Specialist and appropriate FDOT personnel be present for the application and testing.

Prior to zinc application, the concrete surface shall be air blasted to remove any residue from the sandblasting operation. Air stream shall be 100% moisture free and discharge a minimum pressure of 50 psi. Moisture and pressure of the air stream shall be tested on a daily basis.

Zinc Application: Thermal spraying operation shall not be performed during periods where rainfall, high seas, rough waters or any other wet conditions are present. Zinc spraying shall not be performed when excessive wind is blowing which could interfere with the operation as determined by the Engineer. The Contractor shall be responsible for compliance with Florida Administrative Code, Chapter 62-302 and any other Federal or Local codes regulating the quality of the surface waters.

Metalizing shall only be applied to surface areas that have been properly prepared as per 5.3 of this Technical Special Provision and approved satisfactory by the Engineer. Metalizing shall be continuous and un-interrupted within each prestressed beam, pier cap or bent cap. Cold overlaps of the zinc will only be allowed for deficiencies correction.

Typically, zinc application shall be performed on prestressed beams, pier caps and bent caps. Metalizing shall cover the concrete restored area and continue to the opposite face as shown in the construction drawings. Zinc application shall be performed employing multiple spray passes crossing at a 90-degree angle to achieve a coating thickness of 15 to 20 mils as determined by thickness measurements on test coupons or by other means acceptable to the Engineer.

Metalizing Time Window: Coordinate the metalizing and concrete restoration operations such that metalizing is completed and connected to the reinforcement on each component no sooner than 10 days and no more than 90 days after placing the concrete for the concrete restoration operation. Any metalizing to be accepted after 90 days following the placement of the concrete shall be tested and certified in writing by the Cathodic Protection Specialist as having a low probability of corrosion activity around the repaired area. Metalizing accepted after 90 days will be paid for at a reduced price. Price reduction will be calculated at a rate of \$1.00/ft²/day for each day after day 90. No metalizing will be approved if placed after 120 days following the placement of the concrete. Metalizing shall be completed within two hours following sandblasting and before any contamination on the concrete develops.

Thickness Measurements: A minimum of one thickness measurement shall be obtained at 25 square feet intervals. Measurements shall be obtained and recorded in writing by the Contractor as part of the Contractor's QC, and verified by the Engineer. Thickness measurements shall be obtained using a spherical anvil and spindle micrometer with digital display capable of performing measurements ranging from Zero to One inch. Electronic thickness measuring devices may be allowed as approved by the Engineer.

Where deficient coat thickness values are found, the deficient section and the immediate surface around (one square foot minimum), shall receive additional coating so that the coat thickness of the repaired area will reach a minimum of 15 mils. This shall be performed immediately (not to exceed 2 hours) following the first application or the metalizing shall be removed and the entire element shall then be re-metalized.

Bond Strength Test: The Contractor shall conduct a minimum of one coating adhesion strength test (pull-off test) on each metalized element (pile cap) or at every 100 square feet as applicable (if the metalized area is larger than 100 square feet in one component). Each test shall be made in triplicate and the values averaged. Results shall be recorded by the Contractor,

reviewed by the Cathodic Protection Specialist, and shall be subject to verification by the Engineer.

Pull-off tests shall be conducted using a mechanical 0 to 500 psi, fixed alignment adhesion tester as per ASTM -D 4541. Pull-off strength shall be a minimum of 90% of the target values determined from the preliminary on-site test areas on the bridge. Measurements shall be obtained at no less than 24 hours after metalizing but at no more than 72 hours. The Contractor shall provide all equipment and materials necessary to perform all Quality Control Testing as required by this Technical Special Provision. Limits of areas not meeting the required bond strength shall be identified and marked, and then blasted clean of all sprayed metal prior to re-spraying as directed by the Engineer. Description of such areas shall be included in the CP Specialist report.

Zinc Uniformity: Surfaces not intended to be metalized that are adjacent or in close proximity to the surface to be metalized, shall be protected with suitable masking during the zinc application. The masked surfaces shall form neat horizontal and vertical lines. Surfaces of the zinc coated sections shall be uniform in appearance, free of visible coating defects such as; cracking, burning, blistering and un-coated areas and/or other defects that will affect the function and/or durability of the coating. The Contractor shall visually inspect the surface of the metalizing to ensure the above using a lens with a minimum magnification of 10.

Zinc Defects: If a defective coating area is found, the correction shall be performed in the same manner as for deficient thickness correction. Sandblasting of the defective areas may be required as directed by the Engineer. Cold overlaps during reapplication may be necessary. However, re-application on the sprayed zinc anode over previously metalized areas shall not blister burn or otherwise damage the bottom anode layer. Should this occur, the entire element should be sandblasted and re-metalized.

Overcoat: After zinc coating is approved as satisfactory by the Engineer, the Contractor shall apply a coat of water based inorganic zinc silicate over the metalized areas of the structure. This work shall be performed within 72 hours after the metalizing. Coating shall be water based inorganic zinc silicate coating material.

Zinc coating shall be spray applied only and in accordance with the manufacturer recommended thickness and specifications. No roller application is allowed and brush application can only be used as touch-up for correction of small deficient areas. The silicate coating application shall extend six inches beyond the metalized areas in each direction whenever possible and shall have a minimum dry-film thickness of 5 mils. Thickness measurements of the silicate overcoat shall be made at a minimum of two locations per metalized element or as directed by the Engineer. Areas not to be coated shall be properly masked to protect them from over-spraying or over-run, and to form neat horizontal or vertical lines.

T5.5 Method of Measurement

Unless otherwise approved by the Engineer, all measurements shall be taken horizontally and vertically. The method or combination of methods of measurements shall be those that will reflect, with reasonable accuracy, the actual surface area of finished metalized work as determined by the Engineer.

Costs of inorganic zinc coating, connection plates, epoxy, thread rods, and continuity testing and corrections shall be considered as incidental to the metalizing work. No additional payment will be made for materials, equipment and/or labor associated with the inorganic zinc silicate application.

T5.6 Basis of Payment

Payment under this Article shall be at the unit price and shall be made based on actual area (square feet) of metalized concrete surface approved as satisfactory by the Engineer. Payment shall provide full compensation for related items including but not limited to surface preparation, zinc silicate overcoat, C.P. Specialist services, testing, continuity corrections, manufacturer's representative, and any other incidental items associated with this work.

Pay Item No. 400-142-3 Cathodic Protection System (Zinc Spray) per square foot.

T6. SACRIFICIAL CATHODIC PROTECTION PILE JACKET

The work to be performed under this TSP, will include but not limited to removing any unsound and sound concrete to achieve a mechanical bond, cleaning all concrete surfaces, adding reinforcement, and supplying, installing and energizing a sacrificial anode Cathodic protection system, including electrical connections to the reinforcement, materials, testing and ensuring continuity between all embedded reinforcement for all piles to be repaired.

Due to the nature of the deterioration present on this bridge, the Department shall have the authority to increase, decrease, or delete the quantities of work to be performed in excess or below the percentages allowed by FDOT Specifications Section 4-3.1 and revisions thereto with no adjustment to the contract unit prices. The Work will be assigned by the Engineer for a specific group of locations at a time. The Engineer is allowed to stop work due to poor workmanship, unapproved materials or unapproved work procedure at any time without consequence to the Department.

Submit a typed written report by the Cathodic Protection (CP) Specialist describing all work performed including initial measurements such as natural potentials, energized potentials, initial current, anode-cathode resistance, continuity measurements, and size and location of spalls

T6.1 Preparation of Areas for Integral Pile Jacket Installation.

Surface preparation includes the removal of all loose or delaminated concrete and removal of sound concrete, to provide ¾-inch to 1-inch clearance between exposed steel and the surrounding concrete in the damaged area. Maintain all reinforcing steel at original position and sandblast or hydro-blasted clean to a SSPC-SP10 condition all exposed steel prior to concrete placement. No traces of rust, mill scale, epoxy or other contaminants shall be present after cleaning.

Additionally, remove all residue or marine growth in the areas where the bulk anode will be installed and in the areas where the jacket will contact the pile.

Collect and safely dispose all project wastes. Do not drop any construction debris into the water. Employ all necessary protective devices. No spoil area is available within the Department's Right of Way. Comply with all state and federal regulations that apply to the site chosen for disposal. Debris includes but is not limited to scrap metal, demolition debris, concrete and concrete dust, zinc mesh, etc.

T6.2 Procedure Approval.

Submit to the Engineer for approval, prior to any work taking place, a detailed work plan for performing this work item. These procedures include the manufacturer's specifications, operating instructions, and calibrations certifications for all test instruments. Review these procedures and

equipment and recommended as satisfactory by the CP Specialist prior to submittal to the Engineer. The Engineer may conduct independent validation tests.

T6.3 Pile Jacket Installation.

The sacrificial cathodic protection system consists of expanded zinc mesh anodes suspended inside integral pile jackets and installed on the piles at the elevation shown in the construction plans. It also includes bulk zinc anodes installed on each pile receiving a cathodic protection jacket at an elevation below the jacket. This elevation shall be sufficient to provide immersion of the anode at all times (one foot below bottom of jacket).

A survey must be done to determine the specified elevations. Prior to commencing the cathodic protection jacket installation, submit for approval shop drawings indicating equipment, materials, and procedures for the zinc anode installation, the negative connections to the steel, continuity check and correction, and anode system fabrication, including bulk anode and hardware, and expanded zinc mesh anode jackets.

Protect the outside form of the jackets with plastic wrap prior to placing stiffbacks and pouring the concrete.

Obtain the services of a NACE certified Cathodic Protection (CP) Specialist to supervise the overall installation of the cathodic protection pile jackets and testing. The CP Specialist is responsible for the quality assurance of the overall Cathodic protection pile jacket installation. Additionally, the CP Specialist is responsible for all the continuity testing, testing all the continuity corrections, and performing the initial energizing on all the piles including: current, static, and energized potential measurements. The CP Specialist shall also check for shorts between the anode and the steel and notify the Contractor for correction as necessary. Submit the Cathodic Protection Specialist's NACE certification to the Engineer for verification.

Submit a quality control plan prepared by the CP Specialist for approval prior to commencing the system installation. The CP Specialist shall not be associated with the Contractor or the Contractor's organization but shall visit the project at a minimum frequency of once per month to verify the pile jacket installation and other related work, and report to the Engineer.

T6.4 Areas to Receive Integral Pile Jackets.

Sound test all piles prior to work beginning to determine the actual dimensions of the deteriorated concrete to be removed. Each jacket should encompass the entire problem areas within the specified jacket limits. The Department reserves the right to add or delete piling repair and protection as required. Record in writing the dimensions of the damaged areas and verified by the Engineer. Provide at the end of the project a final report detailing locations and size of the spalls and or cracks. Order the jackets once the spall and crack survey is completed, submitted and approved by the Engineer.

T6.5 Expanded Zinc Mesh Anode Jacket.

The zinc anode jacket system shall consist of stay-in-place fiberglass forms provided with a zinc mesh anode pre installed inside the forms and filled with a Class IV (Section 457) concrete with 3/8-inch maximum size of aggregate. The system includes the installation of a zinc bulk anode at an elevation as shown on the plans or directed by the Engineer.

Zinc mesh anode attached inside the jacket is an expanded zinc mesh conforming to ASTM B-69 with the following metal composition:

Pb 0.003%
Fe 0.001%
Cd 0.001%
Cu 0.7- 0.9%
Al 0.001%
Ti 0.001%
Mg 0.0005%
Ni 0.001%
Sn 0.001%
Zn balance

Additionally, the mesh anode shall have the following physical properties:

Electrical conductivity = 28% min.

Solid zinc density = 0.26 lb/cubic inch

Weight of expanded mesh = 1.6 lbs/square foot min.

Open area of expanded mesh = 53% (density)

Solid zinc sheet thickness = 3/32 inches

Expanded mesh anode to conform to the following nominal geometry to allow proper mortar encapsulation:

0.500 inches Hex pattern
0.125 inches Strand width in the short direction
0.500 inches Strand width in the long direction
0.320 inches Short opening
0.750 inches Long opening

Provide the expanded mesh anode with a connection wire that extends to the junction box to perform the connection inside the system connection box as shown in the plans.

Install the CP jackets on piles starting below mean low water elevation as directed in the construction plans, and extending upward to the elevation as determined by the field investigation.

Perform the jacket casting operation in accordance with Section 457 unless otherwise specified in these technical special provisions, the construction plans and/or as directed by the Engineer. Spacing of pumping ports shall be suitable for the selected design mix. However, place the bottom port at no more than three inches from the bottom of the jacket. For battered piles, place the ports along the lower face of the pile/jacket and along the opposite face.

The pumping placement procedure includes flushing all contaminated concrete out of the top of the jacket until uniform, uncontaminated concrete is left in the jacket. Collect and dispose all concrete coming out from the jacket as indicated by the Engineer.

Forms shall be fabricated from fiberglass and polyester resins with reinforced corners. The form dimensions shown in the plans are minimum dimensions permitted. The Engineer may approve minor variations.

The filling material is a Class IV (Section 457) concrete with a minimum compressive strength of 5,500 psi at 28 days and 3/8-in maximum size coarse aggregate. The additives shall contain no chlorides or other salts corrosive to metals and the total chloride content of the concrete shall not exceed 0.4 lb/ CY after placement.

After the filling material has cured, remove all temporary form support and/or bracing from the piles and clean the exterior of the forms of any filling material that may have been deposited. Slope the top of the jackets as shown in the construction drawings.

After removal of stiff-backs, core-drill a 1.75-inch diameter access hole through the jacket to the depth of the pile on one face of the pile at an elevation of six inches above MHW. The inside surface of the access hole (except for the pile surface) to be PVC shielded or epoxy coated after the operation is completed.

T6.6 Bulk Zinc Anode for Jacketed Piles.

Install a bulk zinc anode assembly along with each cathodic protection integral pile jacket. The bulk anode assembly consists of one bulk zinc anode placed at an angle at the depth shown in the construction drawings. If the ground level is higher than the installation elevation, excavate around the pile to provide the proper elevation unless otherwise directed by the Engineer. Restore the excavation to original profile after installation.

The bulk zinc anode is a 48 lb., 99% pure zinc anode (hull type anode) with a steel strap core, conforming to ASTM B-418. The steel strap shall be hot dip galvanized with a minimum zinc thickness of 0.005 inch. Drill a hole at each end of the strap for mounting, fabricate such hole prior to galvanizing.

Clamp the anode onto the pile using two inch hot dipped galvanized steel channels with the flanged side facing the concrete surface (as shown in the plans) using galvanized hardware.

Connect a No. 8 AWG copper strand wire with HMWPE insulation to the anode via a 3/8-inch diameter round steel bar welded to the anode strap. Braze the No. 8 AWG wire to the bar, and encase permanently the bar-wire connection in a 1 1/4-inch diameter by eight-inch long PVC pipe filled with epoxy Type F-2. Done all required fabrication prior to the anode installation. Protect the wire insulation from the heat during the welding and brazing operation. Special precautions may be necessary to protect the wiring insulation and splice during the anode installation.

Install the PVC-epoxy insulated splice extending a distance of approximately two inches inside the bottom of the cathodic protection jacket. Do not drill through the reinforcing steel of the jackets. No conduit will be required on the portion of the wire inside the jacket. Route the wire inside the jacket upward along the closest corner and between the fiberglass form and the zinc mesh anode to the PVC junction box. At this location, connect the bulk anode wire to the zinc mesh anode wire and the reinforcing steel connection wire as shown in the construction drawings.

A temporary conduit for routing the wire to the junction box may be permitted as approved by the Engineer.

Perform the bulk anode installation prior to placement of the filling material for the cathodic protection jacket.

T6.7 Negative Connections for Prestressed Strands.

Install an electrical negative connection on each pile receiving cathodic protection. Perform the connection by brazing two No. 10 AWG XHHW copper stranded wires (black insulation) to different areas of a spiral tie as shown in the construction drawings. Use a sufficient length of wire such that the wires can be routed to the junction box without any splices. Maintain this location constant at every pile unless otherwise approved by the Engineer and the CP Specialist. Coat the brazed part of the negative connection wire (at the spiral ties) with 100% solids, non-conductive epoxy such that no wire or brazing material will be in contact with the concrete

when patching; extend the epoxy coating a minimum of ½-inch over the installation. Braze the wire to a minimum length of one inch of the spiral tie.

Route all connection lead wires to the PVC junction box located over the expanded zinc mesh anode as shown in the drawings. Connect the negative lead to the wire originating at the CP jacket mesh anode and to the bulk anode wire at the junction box. Use soldered marine grade with heat shrink heat attached connectors for the connection.

Use stainless steel bolts, nuts, and washers for the connection. Insulate properly the connection after completion. Submit wire splices and connections insulating method and materials for approval prior to performing this work.

The junction box to house the anode to steel connections is a five-inches x five-inches x three-inches or other suitable size with weather-tight/waterproof cover. All PVC components shall be schedule 80, sunlight resistant. Fabricate the box to accept -inch diameter stainless steel bolts that will connect the system wires and shunt inside the box. Extend the bolt outside the box to a minimum of one inch with no sharp edges.

Use type 316 stainless steel for the hardware necessary in the installation of the PVC conduit and junction box. Seal all entrance and mounting holes in the junction box with an approved heavy-duty marine grade silicone and provide all boxes with a vapor emitting corrosion inhibitor. Maintain constant the elevation of the junction box throughout the project.

Perform the concrete excavation to expose the spiral tie inside the jacket limits. Keep the dimensions of excavation to a minimum. Perform the routing wires outside the excavation to the connection junction box inside the jacket to the connection box. Submit details of the intended method for this operation and material specifications for approval by the Engineer.

Verify continuity between the connections and the spiral tie prior to coating with epoxy. Repair any connection testing discontinuous. After connection is approved, fill the excavation with an approved mortar.

Prior to installing the jackets, the CP Specialist shall perform an electrical continuity test between all strands, spiral ties, and any other steel components on all the piles receiving cathodic protection. Such tests and any necessary continuity correction tests shall be performed and certified correct by the Cathodic Protection Specialist.

Expose the strands and spiral for continuity testing by drilling a 3/4-inch diameter hole to each strand in the concrete and measuring inter-strand voltage using a high impedance voltmeter. Where continuity correction is required, additional concrete excavation will be necessary. Size of continuity correction excavation is four-inches x four-inches inside the jacket limits. On piles where more than two discontinuous strands are found per face, saw-cut a two-inch wide groove at the same elevation where negative connections are to be made or as directed by the Engineer. The depth of the groove is limited only to expose the outer surface of the strands. Provide continuity between strands at the groove.

Fill any hole or excavation for continuity testing performed outside or inside the jacket limits with an approved mortar no later than 24 hours after completing the tests and prior to installing the jacket. Observe special care to avoid cutting or damaging any of the strands or spiral ties during the drilling, saw cutting or removal operation.

Provide continuity by resistance welding two continuous solid steel wires to each strand requiring continuity correction inside the excavation. The minimum wire size is 10 AWG. Re-test continuity on all strands after this operation is completed. All welds to be approved as satisfactory by the Engineer. Coat the continuity welds with 100% solids, non-conductive epoxy such that no welded wire is in contact with the concrete when patching; extend the epoxy

coating a minimum of ½-inch beyond the weld. Submit for approval intended resistance welding equipment and procedure in the shop drawings prior to performing this work.

Elevation for continuity correction excavations cannot be lower than five feet above high tide unless shorter jackets are used. Contain all excavations within the jacket upper limits.

Provide all the equipment, tools, materials, and labor necessary to access and make the connection to the spiral tie and conduct all testing. The wire gauge and the resistance welder output for this operation is subject to final approval by the Engineer.

Test and correct the continuity between all new bars as necessary. Route separated connection wires shall be routed to the junction box for connection to the system.

T6.8 Energizing.

Energizing of the jackets shall be performed within 60 days after they are cast. The Cathodic Protection Specialist shall submit a report to the Engineer detailing: continuity testing and correction, anode to steel resistance, energizing current and static potential, and energized on and off potentials for each pile. Potentials shall be measured with a reference electrode placed in the water and in the access hole.

T6.9 Acceptance Criteria.

The work performed under this TSP will be accepted if it is in accordance with all requirements of the plans, drawings, and specifications. It will be accepted if performed with approved materials, procedures, and satisfactory completion is demonstrated by tests that indicate continuity has been established as specified above. Prepare a report with all test data and its corresponding locations and submit to the CP Specialist for review and approval, prior to the final submittal to the Engineer. No jackets with any of the anodes shorted to the reinforcement or misaligned will be accepted. All shorted jackets shall be removed and replaced by the Contractor at no additional cost to the Department. Jackets misaligned one inch or less may be accepted at a reduced price as determined by the Engineer.

T6.10 Basis of Payment.

Payment under this section includes the unit price for Pay Item No. 457-2-221 based on the linear foot (lf) of cathodic protection jacket installed, and approved by the Engineer. Pay Item No. 457-2-221 also includes full compensation for all materials, equipment and labor associated with the fiberglass forms with zinc mesh anode, concrete filler, electrical connections, continuity testing and corrections, Cathodic Protection Specialists services, additional testing, quality control, and any incidentals to this item necessary to complete the work. Pile surface preparation including concrete removal and Concrete Class IV (Section 457), reinforcing necessary, and electrical work are considered incidental to the installation of the cathodic protection jacket and are included in Pay Item No. 457-2-221.

T7. PIER BULK ANODE ASSEMBLY

Install submerged bulk zinc anode assemblies on selected substructure elements of the bridge as indicated in the Plans and as directed by the Engineer based on Contractor's concrete damage report as specified on the Technical Special Provisions for Concrete Spall Repairs.

T7.1 Anode Assembly and Installation.

The anode assembly shall be constructed and installed so the bulk zinc anode is placed at a minimum depth of 1 foot below the mean low water (MLW) elevation as specified in the Plans. The Perform all the necessary surveying and research to determine the mean low water elevation on the bridge. Mean low water elevations shown in the Plans were obtained from existing Plans and may not be actual.

The anode assembly shall consist of two 50lb, 99% pure zinc anodes welded to the flanges of a C6x13 316-stainless steel channel. The anode assembly shall be anchored to the piers as detailed in the plans. A minimum of 3 additional anchoring holes shall be provided on the channel to accommodate any location in conflict with the reinforcing steel. Variations from these locations may be allowed if conflict with the reinforcing steel or the spall exists. Where elevation adjustments are required, such adjustments shall be as directed by the Engineer. Top of steel channel shall not be positioned at an elevation higher than top of pier footer or top of pier wall.

The stainless steel channel shall be coated with an approved coal tar epoxy. The channel shall be solvent cleaned prior to application of the coating. Following the solvent cleaning, the channel shall be blasted to provide an angular profile as required by the coating manufacturer. Do not coat the zinc anode.

T7.2 Preparation of Areas for Bulk Anode Installation.

Concrete Removal: All concrete removal shall be made as shown on the plans and the Technical Special Provisions for Concrete Spall Repairs.

Electrical Continuity: Electrical continuity throughout the steel reinforcement in the pier footer, pier wall or column shall be ensured and tested by the Cathodic Protection specialist. Connection at the steel shall be performed by drill and tap to the exposed rebar in the spalled area.

T7.3 Anode Connection.

The electrical connection between the anode and the reinforcing steel, shall be made through a 5/16" diameter stainless steel threaded rod securely screwed into an existing rebar previously drilled and tapped as detailed in the Plans. The voids between the core and the connecting rod shall be grouted and the connection at the channel shall be epoxy sealed as detailed in the Plans.

T7.4 Method of Measurement.

The work under this work item will be paid for based on the individual number of pier bulk anode assemblies installed (each) as described in the contract documents. Each pier bulk anode assembly shall be tested by the Cathodic Protection Specialist prior to submittal to the Engineer for satisfactory approval and payment.

T7.5 Basis of Payment.

Payment under this Article shall be at the unit price and shall be made based on the actual number of pier anode assemblies installed and approved by the Engineer. Price and payment shall provide full compensation for all work specified in this section including but not limited to: materials, labor, equipment, bulk anode, stainless steel channel and mounting hardware, Cathodic Protection Specialist services, and any other incidentals related.

Pay Item No. 455-81-102 Cathodic Protection, F&I, Pier, Zinc Anode Assembly. (EA)

END OF SECTION

TECHNICAL SPECIAL PROVISION

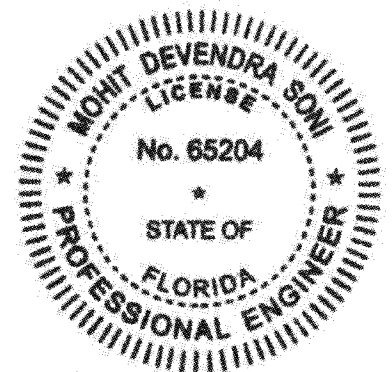
FOR

Concrete Spall Repairs
SR A1A/MacArthur Causeway East Bridge Repairs
Bridge No. 870077

Financial Project No. 436522-1-52-01

The official record of this Technical Special Provision has been electronically signed and sealed using a Digital Signature as required by Rule 61G 15-23.004, F.A.C. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Professional Engineer: Mohit Soni, PE
Date: 11/17/2017
Fla. License No.: 65204
Firm Name: Stantec Consulting Services, Inc.
Firm Address: 2056 Vista Parkway, Suite 100
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Certificate of Authorization: 27013
Pages: 1 through 6



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TECHNICAL SPECIAL PROVISIONS
For
CONCRETE SPALL REPAIRS

T1. SCOPE OF WORK

General: The work under this TSP consists of restoring spalled concrete with Polymer Modified Portland cement mortar/ concrete as directed by the Engineer. The work includes location and documentation of cracked and unsound concrete, removal of cracked and unsound concrete including solid concrete behind bars (for mechanical bond) and concrete restoration by means of patching and/or forming.

T2. POLYMER CONCRETE MATERIALS AND TESTING

The material to be considered shall meet the following Physical Requirements:
Polymer Concrete: A Polymer Modified Portland cement mortar/concrete containing corrosion inhibitors. Use the polymer concrete with anti-washouts for spalls below water. The polymer concrete shall meet the following requirements as a minimum.

Property	Polymer Concrete
Compressive Strength	
1 day	3,500 psi
7 days	5,500 psi
28 days	6,500 psi
Tensile Strength	
28 days	500 psi
Flexural Strength	
28 days	720 psi

The Contractor shall furnish to the Engineer a certified test report for the polymer concrete above furnished and described in this specification, indicating the materials meet all requirements specified. Include intended use for each material submitted.

The materials shall be mixed and installed in accordance with manufacturer's recommendations. Contractor shall require the manufacturer to provide a Field Representative upon request. Upon completion of all work, the Contractor shall furnish the Department with a notarized certification on their letterhead that reads as follows:

"We do hereby certify that the materials and work incorporated into any and all elements of this Technical Special Provision meet Florida Department of Transportation Specifications, Plans and Technical Special Provisions, and manufacturer's recommendations related thereto".

Conduct a demonstration mix prior to commencing any concrete repair with all the required testing to demonstrate that the material can be mixed to meet the requirements of this Technical Special Provision and/or the manufacturer technical sheet.

In addition to the quality control required by the Standard Specifications for concrete products, compressive strength and plastic testing will also be required for each field batch of Polymer Modified Concrete used for spall repairs. A field batch is defined as each load of the concrete mixer when field batching is approved. Sampling schedule for field batching may be reduced as directed by the Engineer based on satisfactory previous test results and adequate Contractor's quality control. Six cube samples (2" x 2" x 2") will be used for testing purposes on unextended mixes and 4" x 8" cylinders to test extended grouts. If the Contractor prefers to replace the cube samples with 4" x 8" cylinders, submit a written request to the Materials Engineer for approval.

T3. SPALL REPAIR PROCEDURES

Surface preparation shall consist of mechanically removing all unsound concrete within the repair area to sound concrete. Chip back unsound concrete to sound concrete. Areas to be repaired shall be sound, clean, and free of any contaminants. All delaminated, cracked, and unsound concrete shall be removed by the Contractor from the areas that are hollow sounding when tested or areas with visible cracks. Additionally sound concrete may require removal to obtain the $\frac{3}{4}$ inch to 1 inch behind the existing reinforcing steel to achieve a mechanical bond; a mechanical bond is required for all spall repairs. In no case shall a spall edge exceed 6 inches without a mechanical bond in a vertical or horizontal direction. A 15 lb. chipping hammer (maximum size) and a 4 lb. scaling hammer shall be used. Remove an additional 6 inches of sound concrete from edge of spall if corrosion is noted.

Concrete removal: Chip concrete substrate to obtain a surface profile of $-\frac{1}{16}$ inch. to $-\frac{1}{8}$ inch in depth with a new fractured aggregate surface. Roughen profile to edge of spall.

Sandblast or hydroblast all exposed steel to a SSPC 10 condition. No traces of rust, mill scale, epoxy, or other contaminants shall be present. Special attention shall be observed to ensure proper cleaning and preparation of the backside of exposed reinforcement.

During the concrete removal process, great care shall be exercised to prevent damage to the reinforcing steel and prevent damage to sound concrete beyond the delaminated areas, sound concrete beyond the mechanical bond areas or sound concrete beyond the continuity correction areas. Should reinforcing steel or sound concrete as described above be damaged by the Contractor's operation, concrete removal work shall stop and a damage report shall be submitted to the Engineer. A repair method for the damaged area(s) shall be submitted for approval by the Engineer prior to continuing the concrete removal work.

Perimeter of Spall: the perimeter of the spalls shall be saw cut to a minimum depth of $\frac{3}{4}$ " inch or as specified by the product manufacturer. Depth of saw cut may be adjusted if shallow steel is encountered as approved by the Engineer. Provide horizontal and vertical cuts that follow the general pattern of the spall avoiding 90-degree angles as the geometry of the spall permits. Saw cut method and equipment shall be submitted for approval by the Engineer prior to commencing any work.

T4. CONCRETE RESTORATION

Concrete restoration shall be performed by the form and pour method unless otherwise approved by the Engineer.

The patching material shall be obtained from a source that will be approved by the Engineer.

For applications where there is a need to extend the patching material by adding coarse aggregate, the aggregate shall meet the product manufacturer recommendations and be approved by the manufacturer, or shall be from a Department approved source.

For beam repairs, concrete restoration shall be performed by Form and Pumping polymer modified mortar/concrete as specified in this TSP. Once prepared forms will be placed over an entire area, a port or inlet with valve will be plumbed to the form with a cutoff. A method or route must be established to eliminate air being trapped. This can be quite serious if not installed during the forming process.

The concrete substrate and the exposed reinforcing or prestressing steel shall be clean, sound and free of surface moisture before restoring the section.

Before placement of patching materials, all concrete repair surfaces and reinforcing steel shall be coated with a water-epoxy cementitious bonding agent and rebar corrosion inhibitor identified in the FDOT's APL listing. At repairs receiving cathodic protection, follow the requirements in TSP for cathodic protection. Place compound in accordance with manufacturer's recommendations.

T5. PLACING AND FINISHING

Finishing: Concrete spall repairs shall be smooth and uniform and shall match the original profile of the concrete components. Concrete placement methods shall be adjusted as necessary to prevent gaps between the existing concrete and the concrete patching material.

Curing: The concrete shall be allowed to cure as per manufacturer recommendations.

T6. METHOD OF MEASUREMENTS

The quantity to be paid for will be the volume, in cubic feet, of Polymer Modified Concrete actually used in the spall repair satisfactorily placed and accepted.

T7. BASIS OF PAYMENT

The quantity to be paid for shall be the volume in cubic feet of spalled areas actually restored, completed in place and accepted. No additional compensation will be made for material reapplication or removal due to contractor error, or to correct deficient bonding, or strength values. The method utilized in determining the volume shall be the area in square feet of spalled areas, multiplied by the average depth of such areas.

The quantity determined as provided above shall be paid for at the contract unit price bid for Restoring Spalled Areas. Such price and payment shall be full compensation for all work specified in this Section and shall include all materials, testing, equipment, labor, concrete removal, saw-cutting, surface preparation, new reinforcement, forming, curing, and incidentals necessary to complete the work.

Item No. 401-70-2 Restore Spalled Areas, Latex Modified Mortar Styrene-Butadiene Cubic Feet

END OF TECHNICAL SPECIAL PROVISIONS

UNOFFICIAL
DOCUMENT

TECHNICAL SPECIAL PROVISION

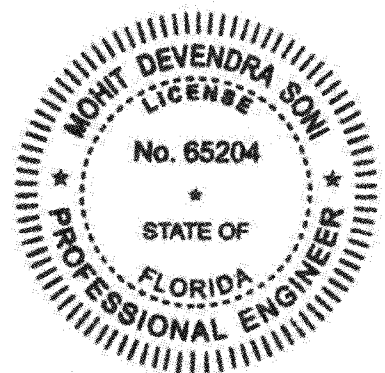
FOR

High Early Strength Concrete
SR A1A/MacArthur Causeway East Bridge Repairs
Bridge No. 870077

Financial Project No. 436522-1-52-01

The official record of this Technical Special Provision has been electronically signed and sealed using a Digital Signature as required by Rule 61G 15-23.004, F.A.C. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Professional Engineer: Mohit Soni, PE
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Certificate of Authorization: 27013
Pages: 1 through 6



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TECHNICAL SPECIAL PROVISIONS

For HIGH EARLY STRENGTH CONCRETE

T1. SCOPE OF WORK

General: The work under this TSP consists of the replacement of existing sections of bridge deck utilizing High Early Strength Concrete. Work performed under this section shall include the furnishing of all material, labor and equipment necessary to prepare and finish the work in accordance with these Specifications and Plan details.

T2. MATERIALS

General: Meet the following requirements:

- (a) Coarse AggregateSection 901
- (b) Fine Aggregate*Section 902
- (c) Portland CementSection 921
- (d) WaterSection 923
- (e) AdmixturesSection 924
- (f) Curing MaterialsSection 925
- (g) Pozzolans and Slag.....Section 929

*Use only silica sand except as provided in 902-5.2.3.

Do not use materials containing hard lumps, crusts or frozen matter, or which is contaminated with dissimilar material.

T3. COMPOSITION OF CONCRETE

T3.1 Mixture Proportions: Concrete prepared under this specification shall meet the requirements of Class IV (Bridge Deck) with High Early Strength requirements. Designate the actual proportions to be used to produce a concrete with a minimum 24-hour compressive strength of 3,500 psi [24 MPa], and with a maximum slump limit at jobsite of 3 inches [75 mm].

Prior to producing concrete, submit the design mix for approval on a form acceptable to the Department. The minimum over design shall be 400 psi [3 MPa] at the 24 hour acceptance strength. Indicate slump before and after addition of accelerator. Use mixes approved by the Department and from an approved concrete production facility meeting the requirements of Chapter 9.2 of the Materials Manual – Concrete Production Facilities Guidelines.

When an accelerating admixture is used in solution, the amount of water in the solution is considered to be part of the mixing water. Make necessary adjustment to the concrete mix-water to account for the amount of water in the accelerating admixture solution. Inspect and

test the concrete for consistency and strength, subject to the following tolerances from approved mix design values:

**Slump ± 1.5 inches [40 mm]

Entrained Air..... 1% to 6%

**For values as specified in the approved Design Mix prior to the addition of accelerating admixture.

T3.2 Certification: Provide certification in accordance with 346-6.3.

T4. BATCHING AND MIXING CONCRETE

Obtain concrete that meets the requirements of 346-7.

T5. TEST REQUIREMENTS

Make one set of two test cylinders from the concrete placement to assess strength for opening to traffic. Test two cylinders 24-hours from the time of sampling and consider the average compressive strength of these two tests to be the 24-hour compressive strength.

Perform concrete sampling and testing according to standard test methods listed in 346-5.

Cure the test cylinders by methods identical to those used in curing the concrete deck slabs, for the first 12-hours, then by laboratory cured condition thereafter until the 24 hour strength test. The test cylinders shall be tested at 24-hours from the time of sampling.

T6. CONCRETE DECK SLAB ACCEPTANCE

Acceptance will be based on plastic properties, achieving the 3,500 psi [24 MPa] compressive strength prior to opening the slabs to traffic.

If the compressive strength of any set of test cylinders fails to meet the strength requirements, take immediate corrective measures to ensure that concrete placed in the future meets the specified strength requirements. The Engineer will evaluate the particular circumstances in each instance where a strength deficiency occurs. If the Engineer determines that there will be a significant effect on the service life of the replaced deck slab, replace the concrete at no expense to the Department.

If any uncontrolled cracks appear during the life of the contract unacceptable to the Engineer, remove and replace any slab at no expense to the Department. Repair by removing and replacing the deck across the full width of all affected lanes. Investigate and implement immediate effective solutions to eliminate further cracks, in consultation with, and subject to the approval of, the Engineer.

T7. PLACING, STRIKING OFF, CONSOLIDATING AND FINISHING CONCRETE

Place concrete as specified in 400-7.

The requirements of 400-7.13 and 400-15 are applicable to this Section.

T8. CURING

Cure the bridge deck for a minimum of 24 hours and for such additional time as directed by the Engineer. Curing shall not be stopped until concrete reaches 3500 psi minimum. Curing covers shall be applied as soon as the concrete has set sufficiently to prevent marring of the surface. Cover the surface and exposed edges with 2 layers of white burlap-polyethylene curing blanket conforming to Section 925 or insulating blankets approved by the Engineer. Adjacent sheets of curing covers shall be lapped a minimum of 6 inches. Continue curing the slab until the concrete achieves the required 24-hour strength.

T9. TEST REQUIREMENTS

T9.1 General: Keep the deck slab closed to traffic until the compressive strength requirement of 3,500 psi [24 MPa] is achieved. Verify the achievement of the required strength by cylinder testing as specified in 348-5 or the use of the maturity method test as described in 348-9.2.

Protect the deck slab from all traffic, including construction vehicles, until the specified 3,500 psi [24 MPa] strength has been obtained. Such protection shall include the erection and maintenance of signs, lights, barricades, construction and removal of temporary pavement, bridges, crossovers, and the use of flagmen or similar methods approved by the Engineer. The protective measures shall be arranged so as not to interfere with traffic lanes being utilized for required maintenance of traffic.

T9.2 Maturity Method Testing: Provide and perform, with the assistance of the Engineer, Maturity Method Testing as specified in ASTM C 1074 using Maturity Meter apparatus specified therein.

Temperature sensors will be embedded at locations designated by the Engineer.

When this method is used, a strength-maturity relationship chart, as outlined in ASTM C 1074, will be prepared and tested at the concrete producer's design mix trial batch laboratory, or at other approved laboratory facilities designated by the Engineer. Compressive strength tests, as specified in ASTM C 1074, will be at ages 4, 6, 8, 12, 24 and 48 hours in accordance with ASTM C 39.

The Engineer may require compressive strength testing as outlined in 348-5. Fabricate six test cylinders for protection strength and Maturity Meter correlation testing. The compressive strength cylinder and maturity meter correlation testing will be performed for the first production day and at the discretion of the Engineer for each remaining placement week, or until terminated by the Engineer.

T10. METHOD OF MEASUREMENTS

The quantity to be paid for will be the volume, in cubic yards, of Concrete placed and accepted.

No separate payment will be made for obtaining the required concrete finish.

T11. BASIS OF PAYMENT

Price and payment will be full compensation for all work and material required. Price and payment will be full compensation for all work specified in this Section, including all forms, false work, joints, drains, surface finish and cleaning up, as shown in the plans or as directed.

Unless payment is provided under a separate item in the proposal, the above prices and payments will also include removal of existing deck, as provided in Section 110.

The Department will not change the rate of payment for high early strength concrete in which steel may be used due to addition or reduction of reinforcing steel.

The Department will not make an allowance for pumping, bracing, or other materials or equipment not becoming part of the finished structure. The Department will not pay for concrete placed outside the neat lines as shown in the plans.

When using stay-in-place metal forms to form bridge floors, the forms, concrete required to fill the form flutes, attachments, supports, shoring, accessories, and all miscellaneous items or work required to install the forms shall be included in the unit price of the high early strength concrete.

Payment will be made under:

Item No. 400- 4- 4 Class IV Concrete (Superstructure) - per cubic yard.

END OF SECTION

TECHNICAL SPECIAL PROVISION

FOR

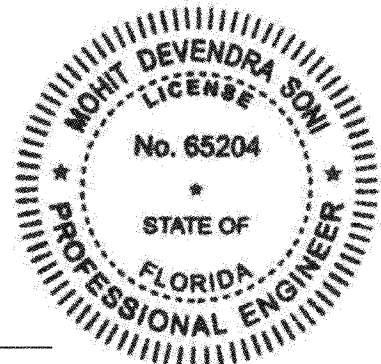
Hydrodemolition
SR A1A/MacArthur Causeway East Bridge Repairs
Bridge No. 870077

Financial Project No. 436522-1-52-01

The official record of this Technical Special Provision has been electronically signed and sealed using a Digital Signature as required by Rule 61G 15-23.004, F.A.C. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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FPID(S): 436522-1-52-01

Page 1 of 6

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TECHNICAL SPECIAL PROVISIONS

For
HYDRODEMOLITION

T1. SCOPE OF WORK

General: Partial depth deck removal, Bridge No. 870077. All Spans (roadway width), through the process of hydrodemolition as shown in the Contract Documents.

T2. REINFORCING BAR EXPOSURE

Bar Mat: That combination of transverse and longitudinal reinforcing steel placed with the structural slab to absorb stresses. Structural slabs generally contain two bar mats; an upper mat and a lower mat.

Upper Mat: That bar mat closest to the existing top surface of the structural slab. Only the upper mat is relevant to this work, except in localized areas.

Localized Area: An area where full depth removal and subsequent patching will be done as part of this work. For the work of this section a localized area shall not exceed 25ft². The sum of the localized areas shall comprise no more than five percent (5%) of the structural slab area to be prepared.

T3. HYDRODEMOLITION WORK PLAN

Prior to beginning the work the Contractor shall submit to the Engineer for approval a hydrodemolition work plan. This work plan shall include complete details of the following items:

a) The Contractor's means of controlling runoff water. The Contractor shall make every attempt to prevent the runoff water from flowing onto lanes of traffic adjacent to the work or leaking onto areas below the bridge. No discharge of water or debris will be permitted into the Biscayne Bay. Bridge scuppers will require inlet protection. Furthermore, the Contractor shall be responsible for compliance with all environmental laws and regulations regarding the discharge of runoff water into the environment off-site. The Contractor shall provide specific details of the method of runoff water treatment and collection, including waste tank locations if used, and shall obtain all necessary permits required for its legal disposal offsite. Onsite disposal of any waste water or other products will not be permitted.

b) The Contractor's method of safety shielding to prevent overspray into traffic. Shielding shall be installed as necessary to ensure the containment of all dislodged concrete, debris, and sparks. The Contractor shall be aware that containment is required to protect the traveling public both adjacent to and below the work area.

c) The Contractor's method for handling expected and unexpected blow-through of the deck. This method shall provide for containment of runoff water, debris, coating repair and the protection of the area under the bridge deck. These methods should account for areas of the bridge over land and water. In the event of an unexpected blow-through, the Contractor shall immediately stop the hydrodemolition equipment and verify sufficient containment and protection procedures are in place and supplement as necessary. The Contractor shall ensure the equipment is correctly calibrated prior to restarting the hydrodemolition operation. The cost of any blow-through the deck will be incidental to the hydrodemolition.

e) A method for preparing, repairing and overlaying the deck at the longitudinal construction joint and outlining how the inherent limitations of hydro-demolition working adjacent to the previously installed overlay will be handled. Details and methodology should include method to ensure that unsound concrete will not be left in this area and how overlay bond will not be compromised. The Contractor shall include concrete removal details at the joints to maintain design width.

Adherence: Once approved by the Engineer, the Work Plan shall be strictly adhered to by the Contractor. If not approved, the Contractor will be required to immediately cease work until the conditions are rectified and approved by the Engineer.

T4. CONSTRUCTION DETAILS

A combination of milling and hydrodemolition is specified to perform the partial depth deck removal. No other alternative method shall be utilized for this portion of the demolition unless approved by the Engineer.

A. Concrete shall be removed from the upper reinforcing mat of the structural slab to the limits designated on the plans.

B. At localized areas, the Engineer may order concrete removal below the plane established on the plans. When such removal reaches the uppermost bar of the lower reinforcing bar mat, removal shall be continued until full depth removal is achieved.

C. Care shall be exercised when removing concrete to avoid damaging reinforcement, or other materials, which are to remain in place. Reinforcing steel damaged by the Contractor's operations shall be replaced with new reinforcing steel of the same size, appropriately spliced. The Contractor shall submit splice details to the Engineer for approval. Other materials designated to remain in place, which are damaged by the Contractor's operations, shall also be replaced.

T5. HYDRODEMOLITION EQUIPMENT

Hydrodemolition equipment shall consist of a water supply system, high- pressure water pumping system, and a demolition unit. The demolition unit shall be fully automated and provide precise control of the water jet(s) to facilitate a thorough and consistent removal operation. If required, the hydrodemolition equipment shall be capable of removing concrete from around and below the reinforcing steel. Such removal may require several passes of the equipment; however payment shall be based on the square yards of deck surface at the depth of removal specified on the plans regardless of the number of passes necessary to achieve the depth specified. The hydrodemolition equipment shall clean all exposed reinforcing steel of rust, concrete fragments, laitance, loose scale, and other coatings that may inhibit or destroy bonding with the new concrete. Reinforcing steel not thoroughly cleaned during hydrodemolition concrete removal shall be handtool cleaned. Any damage to the scuppers shall be repaired to its original condition.

Qualified personnel certified by the equipment manufacturer shall operate the hydrodemolition equipment. Operator certification shall be submitted to the Engineer for review at a minimum (7) days prior to beginning the hydrodemolition operations.

To guarantee that the hydrodemolition operations will not be interrupted for more than (3) consecutive hours, the Contractor shall maintain on site, an adequate supply of wear items, repair parts, and service personnel. No adjustment to the contract time will be considered due to delays associated with repairs or obtaining replacement equipment. The Contractor shall be responsible for supplying the water and all other materials necessary to do the specified work and for the disposal of all removed concrete and other debris offsite.

T6. TESTING AND CALIBRATION OF THE HYDRODEMOLITION EQUIPMENT

The Engineer shall designate a trial area in which the Contractor shall demonstrate that the equipment, personnel, and method of operation are capable of producing results satisfactory to the Engineer. The trial area shall consist of two areas, each approximately 50 square feet. The first trial area shall consist of sound concrete as determined by the Engineer. The second trial area shall consist of deteriorated concrete as determined by the Engineer. The hydrodemolition equipment shall first be calibrated on the sound trial patch to remove concrete to a depth of 1/2 inch. The hydrodemolition equipment shall then be used to remove concrete from the deteriorated trial patch using the operating parameters established from the sound trial patch. If the deteriorated concrete is sufficiently removed as determined by the Engineer, then the hydrodemolition equipment shall be considered as calibrated.

These operating parameters shall be used as the basis for the production removal. Anytime the hydrodemolition equipment is transported offsite and returned, the equipment shall be recalibrated to the approval of the Engineer and at the Contractor's expense with no extension of contract time.

The Contractor shall record the calibrated hydrodemolition equipment's operating parameters and provide the Engineer with a copy. The record shall include at least the following information:

- a) Water pressure (gauge)
- b) Machine staging control (step)
- c) Nozzle size
- d) Nozzle travel speed

After calibration, the hydrodemolition equipment operating parameters shall not change unless directed or approved by the Engineer. In lieu of this method of calibration, the hydrodemolition equipment Manufacturer's Representative may propose an alternate method of calibration which is more suitable for this work. This method shall only be used with the approval of the Engineer.

T7. METHOD OF MEASUREMENTS

The work will be measured as the number of square yards of concrete removed.

T8. BASIS OF PAYMENT

The quantity to be paid for shall be the area in square yards of concrete removed regardless of depth of removal. Such price and payment shall be full compensation for all work specified in this Section and shall include all materials, milling, containment and treatment of water, surface preparation, equipment, new reinforcement, temporary overhang shoring, labor, and incidentals necessary to complete the work.

Item No. 110-12-1 Hydrodemolition, Removal of Deck Surface – per Square Yard

END OF TECHNICAL SPECIAL PROVISIONS

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UNOFFICIAL
DOCUMENT

FLORIDA DEPARTMENT OF TRANSPORTATION FUNDS APPROVAL

E6K72

2/23/2018

CONTRACT INFORMATION

Contract:	E6K72
Contract Type:	EC - DISTRICT CONSTRUCTION CONTRACTS (DIS/CONSTR)
Method of Procurement:	X - COMPETITIVE BID (337.11,F.S.)
Vendor Name:	LEAD ENGINEERING CONTRACTORS
Vendor ID:	
Beginning Date of This Agreement:	04/13/2018
Ending Date of This Agreement:	11/13/2020
Contract Total/Budgetary Ceiling:	ct = \$12,962,183.16
Description:	BRIDGE-REPAIR/REHABILITATION: SR A1A/MACARTHUR CAUSEWAY EASTBRIDGE # 870077

FUNDS APPROVAL INFORMATION

FUNDS APPROVED/REVIEWED FOR ROBIN M. NAITOVE, CPA, COMPTROLLER ON 2/23/2018

Action:	Original	Original
Reviewed or Approved:	APPROVED	APPROVED
Organization Code:	55064010606	55064010606
Expansion Option:	A9	A9
Object Code:	563000	563000
Amount:	\$12,812,183.16	\$150,000.00
Financial Project:	43652215201	43652215201
Work Activity (FCT):	203	202
CFDA:		
Fiscal Year:	2018	2018
Budget Entity:		
Category/Category Year:	088799/18	088799/18
Amendment ID:	O001	O001
Sequence:	00	01
User Assigned ID:	ME6K72	ME6K72
Enc Line (6s)/Status:	0001/03	0002/03

Total Amount: \$12,962,183.16

EXHIBIT B

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

**CONTRACT
District**375-020-26
CONTRACTS ADMINISTRATION
OGC - 08/15

This Contract, is entered into between the State of Florida Department of Transportation, hereinafter called the Department, and
Lead Engineering Contractors, LLC,
 of 5201 Blue Lagoon Drive, Suite 590, Miami, FL 33126, herein called the Contractor.

The Contractor agrees with the Department, for the consideration herein mentioned, and at its own proper cost and expense, to do all the work and furnish all the materials, equipment, supplies and labor necessary to carry out this Contract in the manner and to the full extent as set forth in the Proposal, Standard Specifications as Amended by the Specifications Package and any Supplemental Specifications Packages, and the Plans, under security as set forth in the attached bond, all of which are hereby adopted and made part of this Contract and incorporated by reference herein, and to the satisfaction of the duly authorized representatives of the Department of Transportation, who shall have at all times full opportunity to inspect the materials to be furnished and the work to be performed under this Contract.

The Contractor shall also maintain such insurance as will protect the Department from any or all claims for property damage, personal injury and bodily injury including death, which may arise from operations under this Contract. Certificates of such insurance shall be filed with the Department and shall be subject to its approval for adequacy of protection.

It is agreed that the work to be done under this Contract is to construct or otherwise improve the road(s), bridge(s), and building(s) described as:

A contract that consists of Bridge Repair and /or Rehabilitation along State Road A1A/MacArthur Causeway East Bridge #870077

in Miami-Dade County(ies), a distance of approximately N/A
 and known as Federal Aid Project No(s): N/A
 Financial Project No(s): 436522-1-52-01 Contract No. E6K72

Complete the following as appropriate

Entity Name: <u>Lead Engineering Contractors, LLC.</u>	(Seal)
Authorized Signature: <u>Mauricio Gonzalez</u>	Name & Title (Print): <u>Mauricio Gonzalez</u> President & CEO
*Signature: <u>0EF1EE011F194A5...</u>	Name & Title (Print): _____

*In the event of a Partnership both signature and printed name of 2 partners must be affixed.

Organized and existing under the laws of the State of Florida and authorized to do business in the State of Florida, pursuant to the laws of the State of Florida.

DocuSigned by:
Nadine Chinapoo
 District 6

DocuSigned by:
Alicia Inujillo 3/21/2018 | 2:54 PM
 Attorney FDOT Date
 District 6 General Counsel

In consideration of the foregoing premises, the Department agrees to pay the Contractor, for all items of work performed and material furnished at the unit prices and under conditions set forth in the attached proposal.

IN WITNESS WHEREOF, the Department has hereunto caused these presents to be subscribed and the Contractor has affixed its name and seal, the date aforesaid. The terms of this contract shall be binding upon full execution and date referenced below.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

By: Rudy Garcia Date: 3/26/2018 | 11:58 AM EDT
 Director of Transportation Operations

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

CONTRACT BOND

375-020-27
CONTRACTS ADMINISTRATION
OGC - 08/12
Page 1 of 2

Bond No. 47SUR300057010004

KNOW ALL MEN BY THESE PRESENTS: That we, Lead Engineering Contractors, LLC.

(Entity Name) having its principal place of business at 5201 Blue Lagoon Drive, Suite 590, Miami, FL 33126
305-615-3272
(Bidding Office Street Address, City, State, Zip and Phone #)
(hereinafter called Principal or Contractor) and BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY
hereinafter called Surety), duly authorized to do business in the State of Florida, pursuant to the laws of the State of Florida,
having its principal place of business at 1314 Douglas Street, Suite 1400, Omaha, NE 68102-1944
(City, State, Zip) are held and firmly bound unto the State of Florida, in the full and just sum of
Twelve Million Nine Hundred Sixty-Two Thousand One Hundred Eighty-Three Dollars and 16/100
DOLLARS (\$ 12,962,183.16), lawful money of the United States of America, to be paid to the Florida Department
of Transportation, to which payment well and truly be made we bind ourselves, our heirs, executors, administrators,
successors and assigns, jointly and severally and firmly by these presents; WHEREAS, the above-bound Principal has
subscribed to a contract with the State of Florida Department of Transportation (hereinafter called the Department), for
constructing or otherwise improving a road(s), bridge(s), and building(s)
A contract that consists of Intersection Improvements along State Road 907/Alton Road at Michigan Avenue

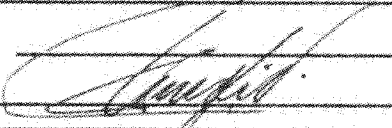

in Miami-Dade County(ies),
particularly known as Federal Aid Project No(s): N/A
Financial Project No(s): 436522-1-52-01 Contract No. E6K72

(hereinafter called the Contract), upon certain terms and conditions in the Contract more particularly mentioned; and
WHEREAS, it was one of the conditions of the Contract that these presents shall be executed; NOW, THEREFORE, the
conditions of this obligation are such that if the above-bound Principal in all respects shall comply with Section
337.18(1), Florida Statutes, and shall promptly, faithfully, efficiently, and fully perform the Contract according to plans and
specifications as therein referred to and made a part thereof, and any alterations as may be made in said plans and
specifications as provided for therein, and within the time period specified, and further, shall remedy any errors in partial
or final estimates and any defects which may exist, appear, occur or result in or from said work within a period of two (2)
years from the date of final acceptance of the work under the Contract and further if the Contractor shall promptly make
payment to all persons furnishing labor, material, equipment, and supplies, and all persons defined in Section 713.01,
Florida Statutes, whose claims derive directly or indirectly from the prosecution of the work provided for in the Contract
(See Section 337.18(1) (a)-(f), F.S., for specific "claim" notice and time limitation requirements), and shall promptly pay
all State Workers' Compensation and Unemployment Compensation taxes incurred in the performance of the Contract,
and shall be liable to the State in a civil action instituted by the Department or any officer of the State authorized in such
cases for double any amount in money or property the State may lose or be overcharged or otherwise defrauded of, by
reason of any wrongful or criminal act, if any, of the Contractor, its agents, and employees, and should the Contractor not
be declared to be in default under the Contract then the bond shall be deemed void. In the event of default by the
Contractor, the Surety shall pay the Department in addition to the above obligations, all liquidated damages and
disincentives assessed against the Contractor because of the default which were not withheld from Contract proceeds
and if the Department at its sole option demands that the Surety take over the project and provided further that should
the Department elect to have the Surety to take over the project, then in such event, the Surety may not select the
Contractor or any affiliate of the Contractor to complete the project for and on behalf of the Surety without the
Department's express written consent and, finally, if the subject Contract required contractor qualification, under Section
337.14, Florida Statutes, or otherwise, the Surety must use a qualified contractor, who is approved by the Department, to
perform the work. It is further covenanted and agreed that any alterations or additions made under this Contract or in the
work to be performed therein or the granting of any extension of time for the performance of the Contract or any other
forbearance by or on the part of either the Department or the Principal shall not in any way release the Principal and the
Surety or either of them, their respective heirs, executors, administrators, successors, or assigns, from any liability
hereunder. Notice to the Surety of such alterations, extension, or forbearance is hereby specifically waived. Under this
bond, the surety, pursuant to Section 337.11(9)(a), F.S. shall be fully liable under such surety bond to the full extent of
any modified contract amount up to and including 25 percent over the original contract amount and without regard to the
fact that the surety was not aware of or did not approve such modifications. However, if modifications of the original
contract amount cumulatively result in modifications of the contract amount in excess of 25 percent of the

original contract amount, the surety's approval shall be required to bind the surety under the bond on that portion in excess of 25 percent of the original contract amount. This obligation shall remain in full force and effect until the full performance of all covenants, terms, and conditions herein stipulated. Failure by the Surety to perform its obligations under the terms of this bond may result in the Surety being disqualified from issuing bonds for future Department contracts.

WITNESS the signature of the principal (Contractor) and the signature of the Surety by Charles J. Nielson its Attorney-In-Fact/Fla. Res. Agent (Agent or Attorney-in-Fact) with the seals of said Principal and Surety hereunto affixed this 9th day of March, 2018

Complete the following as appropriate

Entity Name: <u>Lead Engineering Contractors, LLC</u>	(Seal)
Authorized Signature: 	Name & Title (Print): _____
*Signature: 	Name & Title (Print): <u>FRANCISCO GONZALEZ, PE</u> <u>PRESIDENT & CEO</u>

*In the event of a Partnership both signature and printed name of 2 partners must be affixed.

Organized and existing under the laws of the State of <u>Florida</u> the laws of the State of Florida.	and authorized to do business in the State of Florida, pursuant to
Countersigned: <u>Charles J. Nielson, Florida Licensed Insurance Agent</u>	<u>Berkshire Hathaway Specialty Insurance Company</u> Surety Company Name (Print) (Seal)
Print information below (Florida Licensed Insurance Agent; whether in Attorney-in-Fact or Countersignature role):	By: <u>Florida Licensed Insurance Agent or Attorney-in-Fact (Surety)</u>
Name: <u>Nielson, Hoover & Company - Charles J. Nielson</u>	<input checked="" type="checkbox"/> Above Signatory is also a Florida Licensed Insurance Agent (check if applicable and complete business name, address and telephone number block; if not, have such an agent countersign and complete block)
Business Address: <u>8000 Governors Square Blvd., Miami Lakes, FL 33016</u>	NOTE: Power of Attorney showing authority of Surety's Agent or Attorney-in-Fact is to be attached.
Telephone: <u>(305) 722-2663</u>	

Contractor shall record this bond in the official records of the Clerk of Court of the county where the improvement is located prior to commencing the work in accordance with Section 337.18(1)(b), Florida Statutes.

Send "Notices to Owner" to:

District 6

Florida Department of Transportation, District 6
Construction Engineer or Maintenance Engineer
1000 Northwest 111th Avenue
Miami, FL 33172
Phone # (305) 470-5100

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

CONTRACT AFFIDAVIT

375-020-30
CONTRACTS ADMINISTRATION
OGC - 10/07

STATE OF Florida
COUNTY OF Miami-Dade

Before me, the undersigned authority, personally appeared Charles J. Nielson

(Attorney-In-Fact)

who, being duly sworn, deposes and says that he/she is a duly authorized insurance agent, properly licensed under the laws

of the State of Florida (If applicable, otherwise N/A), to represent Berkshire Hathaway Specialty Insurance Company

(Surety Co.)

of Omaha, NE (City and State) a company authorized to make surety bonds under the laws of the State of Florida.

Charles J. Nielson

further certifies that as Attorney-in-Fact

for the said Berkshire Hathaway Specialty Insurance Company (Attorney-In Fact for Surety Co.)

has signed the attached bond in the sum of

\$ 12,962,183.16 on behalf of Lead Engineering Contractors, LLC. (Contractor)

covering Financial Project No.(s) 436522-1-52-01

Contract No.(s) E6K72; in Miami-Dade County(ies), Florida.

Said Charles J. Nielson further certifies that the premium on the said bond is \$103,318.00, which will be paid in full direct to him/her as

Attorney-in-Fact, and included in his/her regular accounts to the said Berkshire Hathaway Specialty Insurance Company

(Surety)

and that he/she will receive a regular commission of 27.5% per cent as Attorney-in-Fact for the execution of said bond and that the commission will not be divided with anyone except as follows:

per cent to N/A
(If applicable, otherwise N/A)

(N/A, if not applicable)

who is a duly authorized Florida Licensed Insurance Agent properly licensed under the laws of the State of Florida.

ACKNOWLEDGMENT FOR ATTORNEY-IN-FACT

Charles J. Nielson
Agent or Attorney-in-Fact

Sworn to and subscribed before me this 9th day of March, 2018 by

Charles J. Nielson

(name of affiant)

He/She is personally known to me or has produced

(Personally Known) as identification.

(type of identification)

Olga Iglesias

(Notary Signature)

(Notary's printed name)

My commission expires

Notary Public State of Florida

COUNTERSIGNED (If applicable):

Charles J. Nielson
Florida Licensed Insurance Agent





**Berkshire Hathaway
Specialty Insurance**

Power Of Attorney

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY NATIONAL INDEMNITY COMPANY / NATIONAL LIABILITY & FIRE INSURANCE COMPANY

Know all men by these presents, that BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at 100 Federal Street, 20th Floor, Boston, Massachusetts 02110, NATIONAL INDEMNITY COMPANY, a corporation existing under and by virtue of the laws of the State of Nebraska and NATIONAL LIABILITY & FIRE INSURANCE COMPANY, a corporation existing under and by virtue of the laws of the State of Connecticut (hereinafter collectively the "Companies"), pursuant to and by the authority granted as set forth herein, do hereby name, constitute and appoint: David Hoover, Charles D. Nielson, Shawn Burton, Charles J. Nielson, Laura Mosholder, 8000 Governors Square Blvd., Suite 101, of the city of Miami Lakes, State of Florida, their true and lawful attorney(s)-in-fact to make, execute, seal, acknowledge, and deliver, for and on their behalf as surety and as their act and deed, any and all undertakings, bonds, or other such writings obligatory in the nature thereof, in pursuance of these presents, the execution of which shall be as binding upon the Companies as if it has been duly signed and executed by their regularly elected officers in their own proper persons. This authority for the Attorney-in-Fact shall be limited to the execution of the attached bond(s) or other such writings obligatory in the nature thereof.

In witness whereof, this Power of Attorney has been subscribed by an authorized officer of the Companies, and the corporate seals of the Companies have been affixed hereto this date of November 2, 2017. This Power of Attorney is made and executed pursuant to and by authority of the Bylaws, Resolutions of the Board of Directors, and other Authorizations of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, which are in full force and effect, each reading as appears on the back page of this Power of Attorney, respectively. The following signature by an authorized officer of the Company may be a facsimile, which shall be deemed the equivalent of and constitute the written signature of such officer of the Company for all purposes regarding this Power of Attorney, including satisfaction of any signature requirements on any and all undertakings, bonds, or other such writings obligatory in the nature thereof, to which this Power of Attorney applies.

**BERKSHIRE HATHAWAY SPECIALTY
INSURANCE COMPANY,**

By:

David Fields, Executive Vice President



**NATIONAL INDEMNITY COMPANY,
NATIONAL LIABILITY & FIRE INSURANCE COMPANY,**

By:

David Fields, Vice President



NOTARY

State of Massachusetts, County of Suffolk, ss:

On November 2, 2017 before me appeared David Fields, Executive Vice President of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY** and Vice President of **NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, who being duly sworn, says that his capacity is as designated above for such Companies; that he knows the corporate seals of the Companies; that the seals affixed to the foregoing instrument are such corporate seals; that they were affixed by order of the board of directors or other governing body of said Companies pursuant to its Bylaws, Resolutions and other Authorizations, and that he signed said instrument in that capacity of said Companies.

[Notary Seal]



Notary Public

I, Ralph Tortorella, the undersigned, Officer of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies which is in full force and effect and has not been revoked. IN TESTIMONY WHEREOF, I have hereunto affixed the seals of said companies this date of March 9, 2018.



Officer

To verify the authenticity of this Power of Attorney please contact us at: BHSI Surety Department, Berkshire Hathaway Specialty Insurance Company, 100 Federal Street, 20th floor, Boston MA 02110 (617) 936-2971 or by email at Courtney.Walker@bhspecialty.com. THIS POWER OF ATTORNEY IS VOID IF ALTERED.
To notify us of claim please contact us on our 24-hour toll free number at (855) 453-9675, via email at claimsnotice@bhspecialty.com, via fax to (617) 507-8529, or via mail 500 Northpark Town Center, 1100 Abernathy Road, N.E., Suite 1200, Atlanta, GA 30328.

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY (BY-LAWS)

ARTICLE V.

CORPORATE ACTIONS

....

EXECUTION OF DOCUMENTS:

....

Section 6.(b) The President, any Vice President or the Secretary, shall have the power and authority:

- (1) To appoint Attorneys-in-fact, and to authorize them to execute on behalf of the Company bonds and other undertakings, and
- (2) To remove at any time any such Attorney-in-fact and revoke the authority given him.

NATIONAL INDEMNITY COMPANY (BY-LAWS)**Section 4. Officers, Agents, and Employees:**

A. The officers shall be a President, one or more Vice Presidents, a Secretary, one or more Assistant Secretaries, a Treasurer, and one or more Assistant Treasurers none of whom shall be required to be shareholders or Directors and each of whom shall be elected annually by the Board of Directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the Board of Directors, and shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the Board of Directors; and the Board of Directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the corporation.

NATIONAL INDEMNITY COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BY-LAWS)

ARTICLE IV

Officers**Section 1. Officers, Agents and Employees:**

A. The officers shall be a president, one or more vice presidents, one or more assistant vice presidents, a secretary, one or more assistant secretaries, a treasurer, and one or more assistant treasurers, none of whom shall be required to be shareholders or directors, and each of whom shall be elected annually by the board of directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the board of directors. The president and secretary shall be different individuals. Election or appointment of an officer or agent shall not create contract rights. The officers of the Corporation shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the board of directors; and the board of directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the Corporation.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

EXHIBIT C

David E. Gurley *¹
Pamela G. Levinson ¹
Michael A. Fant Jr. ³
Alex L. Gurley
Samuel D. Transue

Of Counsel:

Alfredo Fernandez-Martinez ²
(Admitted in Puerto Rico Only)
Clayton C. Cannon ^{3,4,5}
(Admitted in Texas Only)

GURLEY & ASSOCIATES
ATTORNEYS AND COUNSELORS AT LAW

Additional Jurisdictions:

- ¹ U.S. District Court for the District of Puerto Rico
- ² Commonwealth of Puerto Rico
- ³ Texas
- ⁴ District of Columbia
- ⁵ Alabama



August 7, 2020

Via Federal Express No.: 771209481043

Berkshire Hathaway Specialty Insurance Company
100 Federal Street, 20th Floor
Boston, Massachusetts, 02110

Re: Principal: Lead Engineering Contractors, LLC
Bond No.: 47SUR30005701004 ("Bond")
Obligee: Florida Department of Transportation, District 6
Project: Bridge Repair and/or Rehabilitation along State Road
A1A/MacArthur Causeway East Bridge #870077

Dear Sirs:

Please be advised this firm represents Metalizing Technical Services LLC ("MTS") regarding its claim as an intended third-party beneficiary of the construction contract between the State of Florida Department of Transportation ("FDOT") and Lead Engineering Contractors, LLC ("Lead"), Contract No. E6K72, dated May 26, 2018 ("Contract"). Please accept this letter as a demand for payment from Berkshire Hathaway Specialty Insurance Company's ("BHSIC") referenced payment Bond issued to FDOT to guaranty the contractor's payment obligations under the Contract.

By Florida Statute, BHSIC's Bond is conditioned upon and requires prompt payment to all persons defined in F.S. § 713.01 furnishing labor, material, equipment, and supplies for the work provided for in the Contract. MTS is a claimant pursuant to F.S. 713.01. MTS is owed \$1,196,948.74 for labor, material, equipment, and supplies provided for the work for the Contract for which it hereby makes demand upon BHSIC.

MTS demands payment from BHSIC in the above-stated amount to be delivered to MTS at its place of business at 190 Comfort Road, Palatka, FL 32177, within ten (10) days from BHSIC's receipt of this letter. If payment is not made by such time, MTS shall immediately pursue any and all available legal and equitable remedies including, but not limited to, commencing a collection action against BHSIC for breach of the payment Bond.

Very truly yours,

David E. Gurley